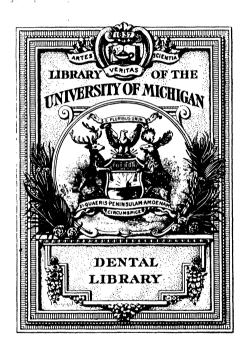
## AMERICAN DENTAL JOURNAL

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## Listerine Tooth Powder

Tooth powders have long been empirically employed, chiefly as a mechanical agent for cleansing the teeth, and with little regard to their composition or chemical action. Many of the articles sold for this purpose contain ingredients prone to fermentative action in the mouth, such as orris root, starch, sugar, etc., and, in addition, pumice stone, cuttlefish bone, or other harmfully abrasive substances.

Listerine Tooth Powder, possessing neither of these objectionable qualities, very acceptably meets all the requirements of a frictionary dentifrice, and promises to give much satisfaction to those who employ it, in conjunction with a mouth-wash of Listerine, suitably diluted.

To dental practitioners of record, the manufacturers will be pleased to send a supply of samples of Listerine Tooth Powder for distribution to patients.

# Lambert Pharmacal Co. Saint Louis



#### PORCELAIN.

#### T. ELHANON POWELL, D. D. S.,

#### EPITOME.

- 1. Porcelain inlays should be used in all conspicuous cavities where gold would be objectionable; many otherwise beautiful mouths have been rendered hideous by a too lavish display of yellow metal.
- 2. For slender teeth, with poor structural conditions, porcelain will strengthen and sustain when fillings of other materials would fail.
- 3. When the physical condition of the patient will not permit the nervous strain of a long sitting for condensation of gold.
- 4. In pyorrhea, when the teeth are badly loosened making condensation of gold next to impossible.
- 5. To attain success in this work, one must study closely every detail, mastering the digital technique of each step before attempting the subsequent and more difficult cases.
- 6. Extension of cavity beyond contact point. Thorough separation to admit of free access. Definite and symmetrical margins. Square and secure seating for anchorage.
- 7. Shape cavity in such manner that the planes of resistance are at right angles to the force of mastication, where this force comes in contact with the filling.
- 8. Straight lines and regular outlines should be studiously avoided; this, to conform to principle 5 in Chapter IV, which says: the general outline of the cavity should be gracefully rounded; by which means the color scheme is improved.
- 9. Provide, when possible, a wedge-lock mechanical retention. See Chapter V, page 466.

- 10. When cavity is obscured by the presence of the gum, clear the field by packing with gutta percha.
- 11. Every cavity should be prepared in such a manner as to enable one to withdraw the matrix with ease.
- 12. After preparing the cavity polish with a fine stone to facilitate the withdrawal of the matrix and to secure a better adaptation of the inlay when finished.
- 13. Reanneal the matrix once or twice during the burnishing period.
- 14. Do not be in a hurry about pushing the matrix to the bottom of the cavity. Haste makes waste at this point as well as at many other points. Pack gradually and patiently when your foil will finally proximate the cavity at all points.
- 15. Remove the wrinkles from the margin but have as many old wrinkles as you please inside the cavity.
- 16. If your matrix rocks reanneal, hold with a tape and reburnish.
- 17. If matrix still rocks, pack again with vulcanite rubber and while stretching tightly across the matrix a piece of rubber dam, burnish the soft rubber thoroughly into the cavity.
- 18. If you have plenty of time, take an impression, swedge the matrix, take it back to the cavity and burnish; your matrix will then certainly be all right.
- 19. Do not take hold of one end of the matrix and distort same by arbitrarily pulling it out of the cavity; but use a "teaser" as described in February number of this Journal, Fig. 10, page 76.
- 20. To choose the shade.—Isolate that part of the tooth which you desire to reproduce. Using a small point of a shade guide, compare equal portions of the shade guide and the tooth until you have a shade which will match the tooth.
- 21. Desiccate the tooth in so far as possible when matching colors. Moisture adds wonderfully in the reflection of light, so remove as much moisture as possible before trying to match shades with a dry porcelain point.
- 22. If your tooth be mottled, imitate this natural condition by the use of oil colors in your porcelain.

- 23. Use a matrix lining, as the color of any body depends on its selective absorption or its per cent of reflective ability.
- 24. In mixing shades great care should be used to exclude all foreign substances. The pad on which the porcelain is mixed should be clean and the instruments used in mixing should not only be washed but dried with a clean white cloth.
- 25. The matrix should be filled even with the margin, leaving a sharp outline so that these margins may be distinguishable at all times, thus leaving the inlay, when baked, free from sharp overhanging portions.
- 26. The electric current should always be turned off before attempting to make any change in the position of the inlay to avoid danger of blowing out the muffle.
- 27. The furnace should be cold when porcelain is placed inside the muffle. Turn on the current and immediately shove the lever of the thermostadt to the button which will fuse the porcelain in a reasonable length of time. Hold at that point until the porcelain is fused; then shut off the current.
- 28. Always try the inlay in the cavity to ascertain its proper position, before attempting to set with cement; and then, in setting, be sure that the inlay is settled into this same position, holding in place with a piece of tape, or silk floss or wooden wedge.

(To be continued.)

#### IN SELECTION OF COLORS.

In the exposed surfaces this is a very important matter, yet one that I think is easily managed. First it must be remembered that the cement when placed under a porcelain filling brings to light all the color there is in it, and makes it appear darker than the one selected. It is necessary to make provision for this, and I know of no better way than to select a color as near that of the tooth as possible, and then add enough plain white to make it about two shades lighter than that required. I know of no fixed rule by which this can be done, as it is largely a matter of experiment and experience with each operator, very much the same as in the combination of several colors.

—Dr. F. T. Van Woent, Cosmos.

#### OPERATIVE DENTISTRY.

BY R. B. TULLER, D. D. S.,

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SOME COMPARATIVE QUALITIES OF OXYPHOSPHATE AND SILICATE CEMENTS.

Users of cement fillings of any considerable experience know that the oxyphosphate cements cling with some degree of permanency to the walls of the tooth cavity. The wasting or wearing away is usually in the middle, and that next to the walls is the last to give way. We find many such fillings hollowed out extensively in the middle, but still covering most of the walls, so that the tooth is still well preserved.

Operators, know, too, as far as their experience has gone with the superior grades of silicate cements, and also from the instructions given by the producers, that a good retentive cavity hold is a necessity to this class of cement, or so-called enamel filling; and while the silicates are apparently the stickiest kind of cements in their plastic state, when they become crystallized they do not, in the mouth, seem to retain their tenacity to the walls as do the oxyphosphates. That is to say, an oxyphosphate filling may be depended upon to do all that we can expect of this material generally, in cavities that are not undercut, or made specially retentive, while it is not so of the silicate cements. Usually, however, where we do put them, the cavity is naturally retentive, but we do put them sometimes in places that are not retentive—that have diverging walls—and expect them to stay. fact all inlay work that depends on cement calls for diverging walls. If we were to use a silicate cement to set an inlay, and it may be done, both the cavity wall, after the matrix has been fitted or the impression taken, and the inlay should be undercut.

Now, it has been claimed, and the authority is not questioned. that laboratory tests of the silicate cements show a decided tendency to shrink; they do shrink, of course, when they will rattle around or casily slide out of the glass tube in which the test is made. The maker of cements, or some of them, say they do not care what these tests show out of the mouth; that in the mouth they do not shrink from the walls of the cavity. My own experience has been entirely

with fillings in actual practice in the mouth, and where the cavity is made retentive I have never seen, in the many that I have made, a single one that showed a line of separation from the margins, if proper attention has been given to forcing the material to the walls and margins at the time of insertion. In a few instances in my early experience I have had inlays come out very soon after they were set, and one or two fillings came out that were inserted in cavities with diverging walls without any undercuts.

This leads me to conclude that when the material is retained properly until it has crystallized, that such shrinkage as takes place, admitting that there may be some in the mouth, is toward the cavity walls or margins, and not away from them, for as before stated I have never seen in any filling properly held in place, the minutest degree of separation from the margins. Those that were not held by some anchorage seemed to cleave from the cavity contact. Of course, a cavity of retentive shape is perferable with oxyphosphate cement, but rarely if ever does a properly mixed and manipulated filling of such material cleave wholly from the cavity walls.

No doubt, moisture has some influence as regards this cleavage, and for one thing it comes in contact with the filling before it is thoroughly crystallized. In regard to the enamel fillings, they must be kept absolutely from contact with water from fifteen minutes to half an hour, and longer. The longer the better; while with the oxyphosphates the advice is with some of them, called hydraulic or submarine. to wet them or allow the saliva to come in contact shortly after insertion. As to clinging qualities, it is well known that the portion of either of these cements that hardens out of the mouth on the slab and spatula free from moisture may be the more readily removed from either by wetting. The oxyphosphates will usually scale off in pieces of varying size, leaving the slab quite clean, while the enamel will be much harder to remove, notwithstanding what has been said about cleaving from the tooth cavity walls when not duly anchored. seems almost a contradictory statement of cement qualities, but it must be taken into account that the mixing slab is usually polished glass or porcelain, and the spatula more so perhaps, even of bone, than the walls of the cavity; and, again, the hardening under dry conditions. In one case moisture is advised, or not specially guarded against, after a few moments, while the contrary is imperative of the

other for considerable time—the longer the better. Any one who has undertaken to remove the enamel from a spatula that has hardened in a dry environment for hours knows that it clings to the bone spatula as though a part of the bone, and though it may be removed easier if dipped in water it takes considerable effort to remove it all. our tooth cavity, thoroughly dehydrated with absolute alcohol or chloroform, after wiping dry, could be kept dry, including the enamel filling, for hours, instead of minutes, we might, and no doubt would, get better results than we comprehend, doing as we do. We coat them with varnish or melted paraffine. How perfectly that protects and how long is uncertain. If varnish is too thick it takes a long time to dry, and it does not get a hold on the filling as does very thin varnish, and the thin dries very quickly. I imagine if varnish has dried only to a tacky consistency, as does a thick varnish within any reasonable time, it is largely removed with the rubber dam, and in that tacky condition what remains is easily attacked by moisture, destroying its efficiency as an impervious coating. Paraffine to get any tenacious hold, if it does at all, must be made pretty hot-hotter, perhaps, than the sensitive tooth will stand. In using the latter it is my habit to flow plentifully in case of proximal fillings, filling the space between the teeth and then cutting my dam away instead of dragging it off the teeth to bring the paraffine with it. It would, perhaps, be better to cut it off in case of a varnish coating.

Of course, as a rule, the dentist has to pursue a course consistent with the time allotted for the work in hand, and the patient's convenience and comfort has to be considered. The rubber dam might be left on for an hour or more in some particular case, and with certain patients, or the dam may be cut away, leaving a suitable portion around the tooth to be brought down, gathered and tied, but such things, while desirable, perhaps, are not generally practicable. However, some means that is reasonably practicable might be devised that would keep enamel fillings dry for a much longer time than we do, with a certainty of better results. In time, perhaps, we may have a submarine enamel, since the liquid used in both classes of cements is practically the same—that is, some form of phosphoric acid.

The silicate cements that I have used in my practical experience are Ascher's, for about three years, and Translux (Caulk's), for a few months. In the mix and manipulation I can see no difference.

Of the constituent parts of either I know nothing, except the claims of the producers. I find both changing in shade a few points after a short time (over night), and in consequence, as the shade grows lighter, I aim to mix a shade deeper than I want, to allow for this sort of bleaching out. With all that, there is no time that the filling looks so well—so in harmony with the tooth—as when it is first done, and before removal of the dam. And yet, taking all in all, the enamel fillings are, in my estimation, a nearer approach to the ideal, esthetically considered, at least, and taking into account the average, and not the high, artistic attainments of experts in porcelain inlay work. The ditch around most of the average porcelain inlays, some time in use, filled usually with a dark debris, though ever so shallow, marks the outline of the inlay as plainly as an old crack in a porcelain dinner plate, and the harmony of shade in much of this work is not so good as an artistic eye can get with enamel filling; and this I say as still an enthusiast in porcelain inlay work considerately placed.

My experience with the enamel fillings has been to put them to test in almost all places, and all teeth in the mouth where I might use any other filling material, and generally the result has been highly satisfactory to me and my patients. The failures are mostly my own fault in mix or manipulation, and one commendable thing with such cases, they are soon apparent and easily corrected. Some faults in shade—a misjudgment in selection of powder or in mixing two colors, is often easily corrected by simply cutting out the exposed portion that offends, and, with new anchorage or retention secured in what remains, a new facing is put in, saving much time and trouble. Other defects may be remedied the same way. The only thing to guard particularly against is not to have the joining of the old and new exposed to view, for even with the same powder the joining can be detected. If this came along some part of the labial exposure it would be noticeable.

I have some rather extensive contours built out with enamel in the anterior teeth, and while they will not stand everything without showing wear, the patients wearing them prefer to have them renewed from time to time to having anything else. In occluso-proximal cavities in both molars and bicuspids they stand up surprisingly well under the usual wear and tear of mastication. For small pits and fissure fillings the enamel is par excellence, and perhaps where one would hesitate as much as any place, I have found them remarkably adapted

to cervical channels, that follow the gum line in many cases. I simply remove the decay, define the margins with healthy enamel, and unless decay requires it, do not go deeper, possibly, than the thickness of the enamel, and then slightly undercut the entire length and at ends of the cavity with either small inverted cones or suitable wheel burrs. Such fillings are the least disfiguring, even if the shade is not perfect, of anything I know, not excepting porcelain, which would be impractical anyway in such proportioned cavities as the narrow curved lines I refer to. Of course, it is equally as satisfactory in cavities of larger proportions. If such cavities go a whole year, and two years, without a sign of failure, can we not feel some confidence in their continued integrity?

Regarding the selection of shades, the guides, so far as I have seen (if any at all), with the powder, are of little value. One should either mix a little from each bottle, shape as desired, and press on to polished glass to harden; or mix a little powder with water as thick as it will drop or flow, and either put a little in the cavity prepared or drop a bit on the surface of the tooth to note the harmony. Or, two colors or more, may be mixed up the same way to see how close a match can be got, favoring a shade of the material a trifle darker than the tooth, for it will bleach out some, as before stated.

If little pellets are made in the regular way, from each bottle, and then an exact half and half from each bottle with every other color, one would have, with a box of half a dozen shades, no less than twenty-one exact shades that may be produced at will and be used to more intelligently make other variations. These guide buttons or pellets would have to be marked with the shade numbers used to produce them.

There are places and conditions where the oxyphosphate cements may be used as a foundation for the enamel, or rather the heart of the filling, with a heavy veneer of enamel. In other words, oxyphosphate dentine and silicate enamel, the latter, however, being heavier than nature's enamel, and the mixing should be done so that the enamel could be spread on the yet somewhat fresh cement, with a view to having them perfect a union. If the oxyphosphate cement is allowed to harden before the enamel is put on, then anchorage or retention should be provided.

(To be continued.)

#### PATHOLOGY.

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#### METHOD OF ISOLATION.

For the isolation of the different varieties of bacteria the most common means is the plate culture. To make a good plate requires strict adherence to details.

Three tubes of culture medium.

A centigrade thermometer.

Two pieces of platinum wire (about two inches long), each of which has been fused into a glass rod about six inches long. The end of one of the wires should be bent into a small loop.

A clean Bunsen flame.

A water bath.

A potato dish prepared as for the reception of potatoes.

A box, made of sheet iron, for holding plates.

Plates, which are slips of clear glass about 4x6 in. whole heated in a hot air oven to 160° C. for one-half hour, then allowed to cool. The plates should be kept in the box until used.

A spirit level.

Three glass benches.

A Koch's cooling apparatus, which consists of a triangle of iron or wood with feet formed by leveling screws, upon which rests a rather large dish filled with ice water and pieces of ice, and covered with a thick glass or iron plate. On this plate rests a bell jar.

The process of making a plate consists of three principal steps:

- 1. Liquefaction of medium.
- 2. Inoculation of tubes.
- 3. Pouring of plates.
- 1. Take three sterile tubes of nutrient gelatine and place them in a water-bath, which contains water at about 35° C. until complete liquefaction of the medium has taken place. During this process care should be taken that the stoppers are not wet, either with the medium or water.

#### AMERICAN DENTAL JOURNAL.

2. The medium is now ready for inoculation. Have the Bunsen burner lighted and the platinum wires near at hand.

Take one of the tubes containing the liquid medium, and place it in the angle between the thumb and index finger of the left hand, holding it as horizontally as possible, and with the stoppered end towards the palm of the hand. Remove the stopper, placing it between the index and middle fingers. Care should be exercised that the portion which fits into the tube points away from the palm and does not touch the fingers or anything else.

Now with the straight platinum wire which has previously been rendered sterile by heating in a Bunsen flame and cooled, take a small amount of the substance to be studied, and place this, without allowing the infected wire to touch anything, into the sterile gelatine, then mix well by rubbing the wire against the sides of the tube just above the surface of the liquid medium. Remove the wire and sterilize it in the flame. Return the stopper to the tube. Shake the inoculated tube taking care that the liquid does not wet the cotton stopper. This is to insure thorough distribution of the infectious material.

The second sterile tube is taken from the water-bath, and placed in the angle between the thumb and index finger. The inoculated tube is placed parallel to the tube just taken. Remove the stoppers, place the one from the inner tube between the middle and index fingers and the other between the little and ring fingers. Care should be exercised that the portion of the stoppers which fits into the tubes points away from the palm and do not touch the fingers or anything else. With a sterilized platinum loop take from the first tube three loop fulls and mix well with the contents of the tube numbered two. This is done by alternately placing and stirring the looped wire into the first, then into the second tube, taking care that when withdrawing the wire from one tube and placing it into the other that the sides of neither tube is touched by the glass rod or wire. The stoppers are now returned to their respective tubes, and the wire sterilized in the flame. The first tube is now returned to the water-bath. The third tube is taken and the manipulation as above described is repeated for tubes two and three.

It is well in order to avoid mistakes as to the identity of the dilutions to twist one, two or three tails on the stoppers of the first,

second and third tubes respectively. The making of the dilution should be done as quickly as possible.

Before pouring the gelatin from the tube it is necessary to sterilize the neck of the tube. To accomplish this, cut off the cotton which projects from the tube, push in the plug a trifle, and then rotate the neck of the tube in the flame until the cotton begins to turn yellow. As soon as the neck is cool the gelatin may be poured. Another method for the same result is as follows: Remove the stopper, pass the neck of the tube through the flame of a Bunsen burner several times, rotate, holding the tube in a nearly horizontal position until cool. If the end of the fingers can bear the temperature the tube is cool enough. This may be ascertained by touching the neck of the tube with the finger, noting at the same time the exact place touched. When pouring the gelatin from the tube be sure that the place touched by the finger is opposite to the point over which the gelatin flows, in other words, the place touched by the finger should be directly over the flowing gelatin.

To pour the plate. Grasp the tube in the right hand, remove the stopper, if necessary, with a pair of forceps, which have been sterilized in the flame, raise one side of the bell jar somewhat and pour the gelatin upon the center of the plate. With the lip of the tube spread the gelatin as rapidly, evenly and fully as possible. Allow the gelatin to solidify under the cover of the bell jar.

#### MODIFICATION.

The above method may be modified if Petri dishes are used. These are flat double dishes of glass, of which the lower portion has a diameter of about 3 1-3 to 4 inches. The dishes are sterilized in a hot air oven by heating to 160° C. for one-half hour, then allowed to cool. The same method as above is pursued up to the time of pouring the plate. The cover is again replaced, and the dish so rotated that the gelatin is spread over the whole surface of the bottom. Then the dish is placed in a level position until the gelatin has solidified.

The lid of the dish should not be raised any higher than necessary and returned immediately after pouring has been completed. After the contents of each tube has been poured the empty tube should at once be immersed in a solution of 1 in 1,000 mercuric chloride.

#### AGAR-AGAR PLATES.

The method for agar-agar plates is the same as the foregoing, except that the temperature must be kept at 39° C., never below, and not more than a degree above. The agar-agar must be melted in a bath of boiling water, after which it is cooled down to the temperature indicated above, before inoculating.

#### DEVELOPMENT.

After plates have been made they should be set aside at a temperature of 18° to 20° C. to develop. It will be observed that at the end of 24 to 48 hours, or perhaps a longer time, depending upon the organism, colonies will have developed on the plates. A colony is supposed to be the progeny of a single organism, hence is a pure culture of that bacterium. A colony generally presents definite characteristics, which must be taken into consideration when identification is desired. Air bubbles which have been embedded in the media are difficult to recognize with the naked eye, but with a low power objective they may generally be distinguished from the colony.

Colonies should be examined by means of a one-inch or a two-third inch objective.

SOME OF THE CHARACTERS OF COLONIES ON GELATIN PLATES.

- 1. General appearance—Waxy, shining, dull, granular, homogenous.
  - 2. Development—Deep, surface.
  - 3. Form-Circular, oval, irregular.
- 4. Edge of colony—Regular, irregular, thick, thin, fringed, hair-like, foliated, clearly defined from medium, merging gradually into medium.
- 5. Non-liquefying—Button-like prominence, level with surface, drop-like, compact mass, uniform zone-like rings.
- 6. Liquefying—Only around the colony, many times the diameter of the colony, forms very fluid mass, forms sticky mass, only on the surface, deep into medium, sinking down into the medium slowly, quickly.
- 7. Color—White, yellow, blue, green, violet, brown, transparent, opaque, colorless with surrounding medium not colored.

The above is an outline of the points that should be observed. Of course this outline does not cover all the possible conditions. The

colony should be carefully studied with the naked eye and under a low power objective. Drawings should be made and all observations carefully recorded.

#### FISHING.

Further study and preservation of the bacteria isolated by the plate method, the organisms should be transferred to a gelatin or an agar-agar tube.

The plate is placed on the stage of the microscope and with a low power objective a characteristic colony is selected. sirable to have but one colony in the field of the microscope. straight platinum wire previously sterilized in the Bunsen flame and cooled is held in the right hand, in the pen position. The hand is supported by resting the little finger on the right corner of the microscope stage. The platinum wire is then placed about midway between the objective and the surface of the medium. steadily in this position, and on looking in the microscope an indistinct shadow is seen. The wire is drawn back until the end of the shadow or indistinct wire is directly over the colony. Should the wire, while one is doing this, touch either the medium or objective, the wire should be sterilized at once and the operation repeated. When the end of the wire has been brought over the colony, gradually lower the point until it touches the colony or cuts it in two. Now carefully remove the wire without touching the microscope or some other portion of the medium. A streak or stitch culture is now made.

#### STREAK CULTURE.

A tube of culture medium which has been sterilized in a slanting position is held by the right hand, in the angle between the thumb and the index finger. The tube should be held in a nearly horizontal position and with the stoppered end toward the palm of the hand. Remove the cotton stopper by grasping it with the little finger of the right hand, being careful that the portion which is to be inserted into the tube touches nothing. Insert the wire deep into the tube and then carefully draw along the entire length of the culture medium inoculating the surface only. This operation should be quickly performed. Replace the stopper into the tube. Before anything else is touched by the wire it should be sterilized in the flame.

#### STICK CULTURE.

To make a stab or stick culture select a tube in which culture medium has not been slanted. Place the tube in the left hand, in the angle between the thumb and the index finger. Hold the tube almost horizontal. Remove the stopper by grasping it with the little finger of the right hand taking care that the portion which is again to be inserted into the tube touches nothing. Insert the wire into the medium nearly to the bottom of the tube. Care being taken that a straight stick or stab is made, and that it is in the center of the medium. Care should also be taken that the wire is withdrawn along the same track. Unless these precautions are observed the characteristic development is often hindered or entirely lost.

SOME OF THE CHARACTERISTICS OF GROWTH IN THE STREAK CULTURE.

Colonies may confine themselves in the inoculating stroke or may spread out to a more or less degree over the whole surface; may grow only on the surface, or send down hair-like or radiating runners into the interior. The growth may form a skin on the surface which may be smooth or wrinkled, the same being shining, dull, moist or dry.

It may, if the variety may be chromogenic, make the medium fluorescent, or may not affect the color of the medium at all, the growth only being colored, or the growth may be almost white while the medium is distinctly colored.

SOME CHARACTERS OF GROWTH IN STICK CULTURE.

The stick culture offers marked characteristics, especially if nutrient gelatin is the medium employed.

The organism may grow along the whole length of the puncture, may develop only at the end of the stick, or on the surface of the medium. Those which grow on the surface may keep close to the point of inoculation in the form of a drop-like mass, or may spread out either in concentric layers, as an even mass of varying diameters, or may form a button-like process above the point of inoculation or a mass resembling the head of a large iron nail.

Along the line of puncture the organism may develop a series of isolated colonies, may form an almost invisible gauzy mass or a distinct growth may be observed along the whole track of the wire.

Various organisms send out from the line of puncture thread-

like processes. These may be either numerous or few, short or long, thick or thin; may be found only at the beginning of the line or along its whole length. Sometimes no central axis is observed, or is only faintly visible with numerous radiating hair-like branches.

Some organisms develop equally well on the surface and along the whole line of the puncture.

As to these forms which liquefy gelatin. This may commence at the point of inoculation and spread rapidly to the sides of the tube, the liquefaction resembling a saucer; or the liquefaction may commence at the center and spread downward and toward the sides of the tube forming a cup. Sometimes the whole length of a puncture liquefies, being wider above than below, forming a funnel which may develop either into a sack or a stocking.

The bacteria causing the liquefaction may form a film on the surface, may sink to the bottom, leaving the upper portion clear, or may be distributed uniformly through the whole of the liquid.

Gas formation may be observed, especially if glucose has been added to the medium.

No organism liquefies agar-agar, consequently liquefaction cannot be observed on this medium.

#### INCUBATOR CULTIVATION.

There are many bacteria which either do not develop or develop very slowly at ordinary room temperature. For these organisms a constant high temperature must be maintained. For this purpose an incubator or brood oven must be utilized. The temperature of this apparatus, by the aid of a thermostat, must be kept constant, generally at 37° C. (blood heat).

Cultures on gelatin should not be placed in the brood oven as this medium liquefies at a temperature far below that of the oven.

#### NOTES.

Grasp a clean cover-glass with a cornet forceps. Place on the glass small drops of water. With a straight sterile platinum wire remove from a tube or the container of the material to be examined a small quantity of the culture or material. Touch the drop until a slight milkiness is observed when held over a dark background. Spread the drop over the cover-glass with the wire.

The liquid should adhere evenly to all parts of the glass. It is

a good plan to pass the cover-glass through the flame several times before use, to burn off any adhering oil.

- b. After the cover-glass is spread it should be allowed to dry either by leaving it exposed to the air or by taking it with the fingers and holding it above a flame, spread side up.
- c. In order that the material shall not wash off during the consequent operations it is necessary that it be fixed to the coverglass. This is done by passing the cover-glass, held by the forceps with the spread side upward three times through the hottest part of a Bunsen flame. The passing should be through an arc of about one foot, as rapidly as the swinging of the pendulum of a large clock.
- d. Enough stain should be placed on the glass to cover its whole surface—the glass being held by the forceps. Care should be taken that the edge of the cover-glass does not come in contact with the forceps, otherwise the staining solution may run into the jaws of the instrument.
- e. After the staining process has been completed all superfluous stain should be washed off with plain water, either in a running stream or by moving back and forth in a large beaker full of the liquid.
- f. It is advisable, especially if permanent preparations are to be made, to examine the specimen before mounting in balsam. To do this, with a piece of cloth dry the clean side, place the spread side down on the glass slide on which there has been placed a drop of water if there is not enough adhering to the cover-glass after the washing has been completed.
- h. If the cover-glass has been mounted in water a few drops of water should be placed at the edge of it to remove it from the slide. If an oil immersion objective has been used for observation the oil may be removed by carefully wiping the cover-glass with a cloth or a piece of cotton that has been saturated with xylol. The cover-glass may be dried either by placing it between pieces of bibulous paper and gently pressing, or taking it between the tips of the thumb and index finger holding the glass in a horizontal position then blow off as much water as possible, allowing that which remains to dry in the air.
- i. Place on the center of a clean slide a small drop of thin balsam; on to this drop the cover-glass, the spread side down.

#### TOOTHSOME TOPICS.

BY R. B. TULLER.

A paradox.

Now, what's a paradox?

Well, it is and it isn't.

It was and it wasn't.

It is peculiar, and yet it isn't.

It is a case when a man dies and goes to his own funeral.

Come to think of it they all do that. But—now we have it—if he should walk behind the hearse at his own funeral, that would be a paradox.

No, it wouldn't either, come to think of it; for they wouldn't have any hearse. Well, any way, that would be a healthy way.

Let me see if I can think of another simile. That won't do either, A simile can't be paradoxical.

A smile might be a paradox, depending somewhat on the kind of smile. I've seen a man "smile" and make a rye face at the same time. I have done it myself and then swore off; and I guess that's a paradox—maybe it was only a parody, and I hope no one will charge me with being paronomastical.

(Gee whiz! who threw that? Quit it!)

Let me see; where was I at? Oh, yes, a paradox is—well, if Dr. Yimreed saw a pair o' ducks rising, and shot at 'em with both barrels and they kept on rising, that would be a paradox; but if they fell, that would be a pair o' ducks—if he could find them.

Send me a brace Yim. If he should, that would be a pair o' dux for me. I've got a moving picture of 'em coming, and that is a—(Yip! Never touched me.)

One of the most optomistic dentists I ever knew—one so opto as to own an auto—is always looking down in the mouth; that is, whenever he has any time to spend in his office.

Oh, peet! Some fellows are born, to autos, some have them thrust upon 'em (I've had 'em almost, on me) and some fellows marry into 'em. I didn't even get a run-a-bout, and thank heaven for that.

Most dentists know what it is to look down in the mouth day after day, and smile at the chance; even though it is paradoxical. What in Helen Carry Nation do we care whether it is or not! Bread and Butterine is the staff of life; or was before Quaker Oats and Postum.

(As to the latter, I prefer a post-mortem and would like to sit on the Coroner's Jury.)

I have known some dentists who could look down in the mouth and elsewhere at the same time; as for instance, into the eyes—that is, of some patients; if the eyes were inviting and agreeable; which sometimes is the case.

Ah! Come off now, y'u divil, or I'll turn the spot light on y'u! You know who I mean.

But how can a man do such things! He either has a case of paradoxitis or strabismus; and I swear to goodness, I never saw a crosseyed dentist; but I have seen some that that might be some sort of an excuse for. Please turn to the steenth page, Code of Ethics, and be good.

Oh, well, of course if she is single and your intentions are honorable, look seven ways for Sunday, if you want to. Say Sunday night; but make it a point to depart at 10:30. Excuse me for buttin' in. It is really none of my affair.

No, I'm discussing this extremely important question of paradox—not pair o' ducks; except as heretofore alluded at. Now, I said I had never seen a cross-eyed dentist; but I've seen some who could see a coin over to the left with the right eye, and another to the right with left eye and gather them both, with any in between by instinct, if they were not redhot or nailed down. "Get the money!" Sure!

On the coins they read: "In God We Trust." Like keeping your powder dry, as was added in Revolutionary days, they acquiesce, mentally adding. "but be nimble." It is a motto they like to "frame up"—all they can get of them. I like the motto myself; but I'd like to frame up a way to get a lot with or without.

Oh, I don't want the stuff myself. I just want to pass it along to those who do want it, and keep dinging me for it. I am located where they really expect one to pay rent; and taxes we have always with us. Life is a paradox. Men will become frenzied in pursuit of a dollar, and gaining it, immediately hand it over to some one else; then go and chase after another, and so on and so on. Why, a dog has more horse sense than that.

Now, what do you think of a blind dentist?

There's another blind dentist who chews tobacco and spits at frequent intervals before his patients, often leaning over them to get

within spitting distance of the dental or fountain cuspidor. I am glad there is but one such. Get on to yourself. It strikes me that is paradoxical.

Another one smokes after breakfast and after lunch, and goes and reeks his breath in the face of his patient. Of course I am not going to tell him not to smoke, but what to do after smoking.

First, he should take his tooth brush, wet it, and sprinkle plentifully with powdered borax, and brush all over the teeth, the gums and tongue. Then wash the moustache, if he has one; also his nose, if he has one, and with borax water, bathe the face.

Now take a mouthful of dioxogen or peroxide of hydrogen, and work it between the teeth and all about the mouth until all particles that might have an odor clinging to them have vamoused. After this use dento or some good antiseptic mouth wash. Work some of this through the moustache, and snuff some up the nose. Follow this up with a touch of oil of cassia on the tongue.

Now, use some delicate, perfumed spray over the face and clothing, wash the hands with nice pure unscented soap, then go to your patient and keep your mouth shut. Repeat as often as necessary. It is not a bad habit for all dentists, smoke or no smoke, if they haven't it already.

In fact I have smelled some breaths of dentists that smoking, bisulphide of carbon and garlic would improve. The rottenest (that's the right adjective) breath I ever had blown in my face was that of a dentist—and I might say one of some rank and standing—both breath and dentist. I think it would be well if he had some one to plainly tell him when his breath was outranking him. He don't know it.

If it is our misfortune to have a patient with a bad breath, we know how to soon abate it without giving the least offense; but the poor patient who is held down, and helpless to guard against your breath if bad, can only protest by getting away—never to come back, perhaps.

Now, what do you know about paradox? Now see here; if one dentist has a bad breath, he or someone else could find another, and not go far, and that would be a pair o' docs; huh?—and they ought to be quarantined; and then some—more.

## Our Foreign Department

DR. THOMAS L. LARSENBUR, Foreign Department Editor

## THE APPLICATION OF THE SLOBRIG PLYER IN CONNECTION WITH GOLD AND TIN INLAYS COMBINED.

DR. THOMAS L. LARSENEUR, FOREIGN DEPARTMENT EDITOR.

(Bacherean, Mecanicien-Dentiste.)

(Le Laboratoire, Paris, March 1, 1908.)

A molar tooth in which almost the entire occlusal surface had been destroyed by decay was to be filled with a metallic inlay.

The first objection that I noticed was the great amount of gold which would be required to cast the inlay. In order to lessen the quantity of gold which I had estimated would be at least three grammes (1½ dwt. 10½ grs.), I decided to construct the inlay with two metals; one less expensive, as tin or silver, for the floor of the cavity, and to finish the inlay with gold. I have obtained inlays made in this manner with the most satisfactory results. Here is described below, the manner in which I proceed.

The cavity is prepared in the usual manner. The impression is taken with wax, or preferably with Girdwood's dentallac. From that impression a model is made in Spense's metal, which has proved to be most satisfactory in such cases. The cavity is then carefully oiled and the impression of the floor of the cavity is then carefully taken by pressing it in a small ball of wax. As the tin will not be visible, it is necessary that the wax should not extend to the upper border of the cavity, consequently it should extend a few tenths millimeters below the outer wall. The superior surface of the wax and the exposed remaining walls of the cavity are then carefully oiled and a second impression is obtained with wax from which the

<sup>\*</sup>This department is to be permanent and will appear each month, conducted by Dr. Larseneur, editor.

gold inlay will be cast. The construction of the second impression offers no difficulty; everything is conducted as when dealing with a shallow cavity. The only thing which is to be considered is the bite which should be taken, mounted on the articulator and the cusps carved in order to obtain a perfect articulation.

Then the whole filling is completed. We now have an impression containing two independent wax inlays.

The upper way inlay, which is to be cast in gold, is then removed with a sharp pointed instrument slightly heated and allowed to cool in position. It is then removed from the cavity and the oil is removed by washing with alcohol. Invest, allow to dry, remove the wax by heating thoroughly and cast with gold, using the Solbrig plyer.

The gold inlay is then slightly heated, and placed in the cavity on top of the second wax inlay, which was left in the cavity. The wax which adheres to the gold may now be removed without difficulty and without any danger of distoration. The impression of wax is then held by inserting a pointed instrument, slightly heated, in one of its free margins. After freely washing it with alcohol, they are invested. The wax is then evaporated, investment is heated, and the tin inlay is cast.

By the use of this process, I have obtained a perfect union between the two metals, and also a very exact fit, I might say, a homogeneous mass of metal.

It is, I believe, unnecessary for me to state that the highest fusing metal should be cast previous to those of lower fusing points. The inlay is now completed. In order to obtain a good retention, I have drilled in the base of the tin inlay a hole in the shape of a dovetail, which cavity, and that of the tooth, are filled with cement, the inlay is then placed into position, held with a burnisher, and after setting of cement finished in the usual manner.

#### COMPLICATIONS IN THE RETARDED ERUPTION OF A PER-MANENT TOOTH.

LEON CERF, DE TIRLEMONT, BELGIQUE.

L'Odontologie, Paris, March 15, 1908.

 the floor of the mouth, for which he had already consulted a physician.

The tumefaction was quite large in size, located back of the lower incisors, immediately under the tongue, close to the frenum linguae. This tumor had two openings near the center, from which a pale yellow pus was discharging in profuse quantity.

The patient declared to me he was suffering very intense pain. It was almost impossible for him to eat, and very difficult for him to speak. He was very much discouraged, fearing that the real cause of his trouble was of a cancerous nature and that the physician did not care to tell him so.

The mouth was examined, and the teeth proved to be free from decay, but the asymmetry of the teeth was very peculiar. In fact, although there were no spaces noticeable, there was in the upper maxillary but one central incisor, which was located on the median line, then came the two lateral incisors to which immediately succeeded the bicuspids, which were followed by the molars.

After questioning the patient, he declared he never had had any trouble with his teeth; it was the first time, in fact, that he had had his teeth examined, although he admitted that when a young boy several of them had been extracted on account of supernumerary teeth which were raising his upper lip. "I have never had any of the lower teeth removed," said he. Upon examination of the lower jaw, I noticed there was a bicuspid missing on the left side.

I immediately surmised that the missing tooth was the cause of all the trouble. After having made an injection of cocaine-adrenalin, I made a large incision with a bistoury. I then noticed imbedded and impacted in the jaw the crown of the bicuspid. With the assistance of a smooth probe I was able to locate the position of the root, which was perpendicular to the roots of the other bicuspid and to that of the cuspid. The extraction was a very laborious one; I had to seat the patient on a pillow on the floor, and in order to reach far enough I had to use a bayonet-shaped forceps. I was fortunate not to fracture it; it came out whole, and was perfect in shape, very well developed and had a normal size.

The adjoining teeth were quite loosened from the extraction, and I had to ligature with a platinum wire, the lateral, cuspid and bicuspid with the adjoining teeth, which were firm. The patient was in-

structed to use peroxide of hydrogen several times a day as a mouth wash.

The next day I saw the patient returning happy, without having had much pain. There still was pus discharging from the socket where the tooth had been extracted, but the inflammation and swelling were notably disappearing.

Two weeks later the mouth was all well, no traces of the trouble could be found and the loose teeth were firm in their sockets, so I removed the ligatures,

## QUICK METHOD FOR CASTING GOLD BRIDGES, PLATES, WITH THE USE OF STEAM PRESSURE.

PAR M. DELVIESMAISON, DE BRUXELLES.

(L'Odontologie, Paris, Jan. 30, 1908.)

After having experimented, in November last, with Mr. Solbrig's method of casting gold inlays, I thought it possible to apply same method for casting bridges with one or more teeth, and here are the results of my researches and the modus operandi:

1. The first experience I had was with a small bridge consisting of molar dummy attached to two hooks.

After having placed the bridge in investment—the parts which I wanted gold covered with wax—I inserted a sprue in the wax by heating. The dimensions of the sprues used for this work were: two or three millimeters in diameter and two or three centimeters in length.

A cylinder of about five centimeters high and three or four centimeters in diameter is used for this size bridge. It is then filled up to its two-thirds with investment: the bridge after having been carefully coated with investment so as to have no air bubbles, is gently pressed down in the center of the tube until the sprue is level with the upper edges of the tube the balance of which may now be filled with investment.

When the investment is almost set, I take a plaster knife and carve the investment in a funnel shape down to half of the sprue which is then removed, and the case heated in the usual manner. After having placed a piece of gold in the funnel, a very strong heat was applied, and as soon as the gold was liquefied, I then applied a

large block of cast iron in which was placed a large piece of asbestos saturated with water. The weight of the iron block acted as a press, and I obtained by this process a perfect bridge.

The tooth and hooks were perfectly united together; the tooth rather the porcelain had no traces of checking. Encouraged by this success I adventured in a more complicated bridge.

2. The second case was a bridge having three teeth and two hooks, of which one was a gold crown and one a pivot tooth.

The gold band for the crown was made in the usual manner; the bite was taken and the cusps carved in the usual manner in wax. A couple of gold hooks were soldered to the band previous to the taking of the bite in order to secure a firmer retention.

The Pivot Tooth, band, post and facing after having been fitted were all waxed together.

After having completed the waxing of the bridge on the articulator, it appeared to me that it would be very difficult for the gold to cast such a bridge, as there were three parts of wax which were isolated one from the other. I then decided to use three sprues having the same dimensions as described above, in order to have three channels for the gold to cast through. Here is how I proceeded:

After having heated the end of the sprues I inserted them in the three isolated parts of the wax and arranged them so they would meet a little higher than the middle, carefully waxing them at that point.

The bridge was then invested as above described, heated, etc., etc.

The casting succeeded perfectly and the result was one of the most satisfactory.

- 3. I then made a bridge of three teeth and two crowns. Here I used five casting channels or sprues and succeeded in casting the bridge perfectly, although two of the facings were slightly checked, which was caused by being too close together.
- 4. The fourth case was a bridge of seven pieces composed of four teeth and three hooks. For this bridge I had to use seven sprues.

I found this operation successful, but not practical as it was a very laborious operation, which required a special large muffle.

In such cases I would advise to construct the bridge in two or three pieces, which afterward could be united with solder.

A few conditions necessary to succeed:

The surface of the wax models should be smooth, and free from oil. The investment free from air bubbles and the investment gradually and thoroughly heated, the wax should be all burned out. The gold must be free of impurities and very liquid. The gold used may be at any karat.

As much as possible always solder the gold bands in places where the casting will reach, as the gold will unite more rapidly on these places and hide the seam. It is always advisable to file the parts where you want the gold to cast; this will give it more tendency to unite together.

Porcelain facings should be at about one millimeter apart to prevent them from checking. Do not be afraid to use a good amount of gold and be sure it is well liquefied before you apply the block. The sprues should be in accordance with the size of the bridge.

In cases where one would fear the flow of the metal before the pressure is applied, it is advisable to use in the funnel a very thin sheet of asbestos, of which one end would pass the side of the tube, which would allow one to remove it rapidly at the moment of the casting.

To succeed in this work, it is necessary to have a very intense heat and it is useful to have two blowpipes, one held in each hand.

By the use of a T tube I have been able to use my two blow-pipes with my foot-bellows.

Here is a description of the apparatus which I use for this work:

- 1. I use for oven, a cast iron pot having the shape of a flower pot. I isolate it from the bench with a sheet of asbestos. It is half filled with pieces of pumice stone or charcoal. I then add a round sheet of asbestos on which I place my muffle, which I surround with hot charcoal. If one desires, the pot may be surrounded by a sheet of iron, having at the bottom a hole to allow for the flame of the blowpipe, which is held in the left hand.
- 2. Three or four muffles, which are composed of simple tubes of steel or brass, five or six centimeters high, five, seven, and nine centimeters in diameter.
- 3. Of a cast iron block weighing three or four kilogrammes, having at the top a handle and at the bottom a diameter of about twenty centimeters. The bottom part of the press should be hollow

enough to receive three or four sheets of asbestos, which may be saturated with water before use. This is the construction of the apparatus which I use, and which I think is very simple.

#### A CASE OF CONGENITAL ABSENCE OF PERMANENT TEETH.

THORVALD KIAER, SURGEON-DENTIST, COPENHAGEN.

CORRESPONDENZ BLATT. FUR ZAHNARZTE.

(L'Ondontologie, Paris, Jan. 15, 1908.)

The author calls our attention to Magitot's work on: "Traite des anomalies du systeme dentaire chez l'homme et les mamiferes" where he denies the existence of such cases of abnormality, although he admits them in pathological cases, such as: Eruptive fevers with gangrene of the mouth, necrosis of the maxillary bone and destruction of the follicles of the second dentine. Linderer speaks of the case of a woman who it seems had never had teeth. Tomes cites two cases. Some authorities claim that there has been error made in their diagnosis. The author has had the occasion to personally observe the following case:

A young man age 25 called on the doctor to have a full upper and lower set of teeth made. He claimed he never had had his permanent teeth.

He had lost his temporary teeth which he said, came loose and fell out. There were five temporary teeth left in the upper jaw which were extracted and absorption of the roots had taken place in all the teeth. There was complete atrophy of the alveolar-process of both the upper and lower maxillary. There was no exostosis nor no traces of inflammation could be found.

The patient gave the following information: At birth he was without nails on either hands or feet. The pregnancy of his mother was normal, and his father was enjoying the best of health. The patient was of a weak constitution, and seemed to be troubled with anemia. In his childhood he had had no serious diseases which could have caused this phenomena. The history of the patient was practically of no assistance to us in helping to find the cause of the absence of the permanent teeth; it most probably was the result of some trouble of the intra-uterine life for which we cannot find the exact cause.



## THE TREATMENT OF THE TEETH OF CHILDREN UNDER TEN YEARS OF AGE.

BY DR. A. E. SANTO, LONDON, ONT.

This subject should be of the greatest possible interest to every dentist, and I only wish it were possible for me to lay the different points before you in such a clear manner as to impart an added in terest in all that pertains to it.

The period of time between the ages of two and ten years constitutes the most important part in the child's history from a dental standpoint, and consequently should require us all to take a deep interest in every patient under the age of ten years who presents for treatment. The whole future of the child may be marred by faulty judgment or careless treatment, and it behooves us as conscientious dentists to so study each case that comes before us that we may feel that we have done our very best toward sending our patient forward greatly benefited rather than hampered, as only too often happens.

The manner in which we receive a child on its first visit for treatment or advice very often lays the foundation for successful work or failure to do good work. They have come to the office in fear and trembling, and we must disabuse their minds of the idea that there is nothing but pain to be met with. The little patients can be handled with comparative ease if we only exercise a little thought and endeavor to gain a little insight into their individual natures.

The first thing to overcome is the dread these little people have of the dental office, the foundation of which we can in nearly every case attribute to the statements made by the parent to the child previous to its visit. Once this dread is overcome and the child finds

Read before the Ontario Dental Society.

that we are really human beings, our task is on the road to accomplishment, and I venture to say that everyone here has heard expressions of surprise from little patients after the completion of an appointment that there was nothing to cause any great pain, and were quite willing to return as often as desired. Upon this first visit to the office it is the duty of the dentist to impress upon both patient and parent the great importance of the systematic use of the toothbrush, and the interest once aroused will often last a lifetime and be the means of securing to the patient a very valuable asset in the form of a perfect set of teeth. We should also at this time inform the parent when to expect the eruption of the first permanent molar, and impress upon them the fact that it is a permanent molar and not a deciduous tooth, as 90 per cent of parents believe, and allow it to decay almost beyond recall before paying a visit to our offices. Of course in cases where systematic visits are made every two or three months by the little patients, starting at two years of age, we are able then to cope with the decay, and even if very rapid, as is so often the case, can nurse the teeth on with temporary fillings until such time as we are warranted in inserting those of a more permanent character.

To accomplish the best results, it is, in my opinion, advisable, as far as possible, to exclude the presence of the parent from the operating room, for in this way the child will be more susceptible to our will, and in our operating to endeavor to use only hand instruments, at least for the first few visits. Kindliness and gentleness should be at the base of all our actions in the treatment of children, and if the child sees in us an honest desire in this regard, and feels that we are endeavoring to alleviate rather than cause pain, we can often accomplish far more than in a similar case upon a much older patient.

The first visits should be short, no matter if the little patient seems quite content to stay, and there is great temptation on the dentist's part to prolong the sitting, for by so doing we are very apt to undo the good that has already been accomplished. The child must not be tired, and must leave the office with none but agreeable impressions to remind him of his visit. Of course all is not sun shine, and in the course of a month's work we are liable to have little

patients present who will go a long way towards exhausting one's supply of energy and patience. In these cases a judicious exercise of firmness tempered with gentleness must be used. Above all means, even under the most trying circumstances, the dentist must have absolute control over himself if he can hope to cope successfully with these different cases.

In addition to the task of gaining the confidence of the child, we have in very many instances to overcome the tendency on the part of the parent to impart a false impression of the nature of the work to be done. Blame in this respect can sometimes be laid at the door of the dentist, but such deception will only make the patient dread each succeeding visit the more, and will often be the means of discontinuing his visits altogether at a time when a little care means so much towards the future comfort and usefulness of the teeth.

We cannot hope to give so great a degree of success in the filling of children's teeth as of those of older people, for the teeth, being temporary, we are of necessity limited to fillings of a temporary nature, but if we are enabled through our honest efforts to retain the teeth in their position their allotted time, giving the patient comparative comfort and a fairly good masticating surface, we have accomplished a good deed.

Of all the deciduous teeth the molars require the greatest amount of attention, and our efforts should be directed principally towards them, as on these devolves the greatest amount of work, and we should endeavor, as far as the means at our command will let us, to reconstruct the parts destroyed by caries.

No doubt you have all come in contact with cases where the distal surfaces of the second temporary molar, being decayed, have been ground away so as not to come in contact with the first permanent molar. This is done, no doubt, with a view to preventing decay of the mesial surface of the permanent molar, but is a grave mistake. The cavity should be filled, and with an amalgam filling, thereby keeping the permanent molar in its proper position and at the same time giving the required masticatory surface to the second temporary molar.

The materials principally used for filling deciduous teeth are

gutta percha, amalgam, and zinc oxyphosphate. For the incisors, for the reason that little retention can be obtained, the zinc phosphate is best adapted. Simple cavities in the molars can be filled with either material, for if inserted under favorable conditions each will give equally good service. The greatest difficulty is experienced in the filling of the proximal cavities between the first and second molars. These, unless attended to at a very early date, usually cover the entire proximal surface of these two teeth, and it is a very difficult operation to so construct a cavity to retain a filling that will give service for a reasonable length of time. It is advisable in some cases where proper retention cannot be obtained to insert one complete filling between these two teeth, thus forming a bridge and preventing a lodgment of food, etc. Gutta percha is probably the best material for this class of cavity, as it will adapt itself to the slight movement of the teeth better than a rigid material such as amalgam or cement, although I have seen both these materials give excellent service if inserted in this way.

Cases where the decay has involved the pulp, must be handled with great care, but if the child has already made several visits to the office little trouble will be experienced in taking the usual course in destroying the pulp by means of a tiny pellet of arsenic fibre saturated with oil of cloves and sealed with cement. After destroying the pulp it is not always necessary to remove the whole of the pulp, but after rendering the cavity thoroughly antiseptic by the use of absolute alcohol and warm air, proceed to fill the inner part of the cavity with a filling made by mixing zinc phosphate with oil of cloves to a creamy consistency and pressing to place with a pellet of cotton. This filling should be covered with a little cement filling, and the outer portion of the cavity with amalgam, as in cases where the pulp is destroyed good anchorage can be always obtained.

Temporary teeth having putrescent pulps should be treated in the same manner as permanent ones, always exercising great care in the removal of the putrescent matter, and, as far as possible, using medicines in the treatment which have an agreeable odor and pleasant taste. A preparation composed of equal parts of the oils of cloves and cinnamon or oil of cinnamon alone is the least objectionable to the little patient.

In the treatment of putrescent pulp, gain free access to the pulp cavity. This is easily accomplished by hand instruments. Remove as much of the infected material as can be done in a few moments, inserting a treatment, and repeating every other day till putrescent matter is removed, together with any tenderness which might have been present. The canals and cavity are then washed out with alcohol, dried, and the filling of oil of cloves and zinc phosphate worked into the canals, and the final filling inserted, as in a simple cavity.

Having nursed the deciduous teeth on to the age of, say, seven years, our efforts are directed towards the four permanent molars which have erupted a short time previously, and also the incisors. It requires the utmost care to prevent the loss of the first permanent molars. The habits of the child at this age being usually most irregular in regard to eating (in fact, he lives to eat rather than eats to live) affords every opportunity for the encouragement of decay, and unless continually watched we will have no good result to show for any work we may have done. It is in very rare cases, indeed, that it is advisable to insert a permanent filling in the incisors of a child ten years of age. We should use filling materials only which can be inserted quickly and with little inconvenience or pain to the patient, and under which the pulp may not be irritated by the effect of thermal changes.

The fact of our using temporary fillings in these teeth sometimes gives the patient and parent the idea that our work is more or less of a temporary nature, and will have to be repeated, but if the proper explanation is given of our actions they will be quite content to have temporary fillings inserted till such time as they would be able to undertake a more lengthy and perhaps a more painful operation.

As stated at the beginning of this paper, patients under the age of ten years constitute a wide field for the putting forth of our best efforts towards assisting nature to bring about the very best possible conditions for the future of the child, and we should endeavor to adapt ourselves to each individual case, having in view always what will result most for the patient's good.

In the treatment of children's teeth we are to a great extent doing what a commercial traveler would style missionary work;

that is, laying the foundation for good solid work in the future, and our efforts in connection with these earlier cases will have an important bearing on our success with them in the future.—Dominion Dental Journal.

#### ETHICAL RELATIONS BETWEEN PROFESSIONAL MEN.\*

BY THOMAS L. GILMER, M.D., D.D.S., CHICAGO.

Men who have chosen medicine as a career realize before their choice is made that medicine is a profession and not a business pursuit, and this idea remains with the best of them through their entire student and professional life. In addition to this opinion there is a belief by the prospective medical man that there is a necessary primary training needed as a foundation upon which to construct a medical education, which will fit him for the study. This belief is harbored, not only by the man who contemplates the study of medicine, but by the world at large, and does seem fit that one to become a professional man should be sufficiently versed in grammar, mathematics, history, physics, Latin, etc., to enable him to easily comprehend and apply what he has to learn to become a professional man. With these beliefs firmly fixed one can understand why young men studying medicine have, as a rule, rather exalted ideas of their chosen calling and why they are, in the main, ethically inclined. Ethics with them is so intimately associated with their calling that to be unethical would be thought vulgar and unworthy of one belonging to so old and honorable a calling. Medicine as a profession dates back hundreds of years and on account of its age and the esteem in which it has ever been held it is surrounded by a halo of glory. Most of the more influential and successful practitioners of medicine have been attracted to medicine primarily, not with the thought that here is a pursuit one can use as a means to gain much money with slight labor and little responsibility, but rather with the idea that it is a great and noble calling, which on this account appeals to them. That there are some unethical men in the practice of medicine is a painful truth, but

<sup>\*</sup>Read before Englewood Dental Society, October 8, 1907.

when one looks back and remembers the physicians he has known he will discover that the great majority of them have been fairly good men ethically, and that they generally have stood for the best in the community in which they resided.

Dentistry is now generally spoken of as a separate profession, an opinion I do not wholly concur in, as it seems to me difficult to separate it from the healing art. Since, however, it is taught in separate schools and has its own degree, we may perhaps speak of it as a separate profession. If it is a separate profession, it is a very young one, as compared with medicine, theology or law. About seventy years ago the first independent dental school conferring the degree D. D. S., was organized. It is within my memory when the majority of practitioners of dentistry were men never having had college training, professional or otherwise, all knowledge of the art having been acquired from preceptors whose training was in turn obtained from a similar source. Mechanical aptitude was then thought the qualification most essential for the practice of dentistry. It was in reality a handicraft, wherein book learing was supposed to be unnecessary to properly equip one for practice. Great progress has been made in dental education, principally in the last quarter of a century. No one now thinks of entering the profession except through the recognized channels, viz., the colleges.

When we study the history of medicine and compare it with dentistry we can easily comprehend why there is more professional spirit, and greater exemplification of ethics in medicine than in dentistry. The laity is just beginning to realize that dentistry is samething more than a rather high grade trade, a little above the jewcler. This belief has not been entertained by the uneducated only, but was and is to a great extent the opinion held by the educated, including many o fthe best informed physicians and members of other professions. If today the medical man who has given the subject little thought, and there are many of these, is told what the curriculum of the dental school embraces, he is almost skeptical.

We have seen the mental attitude of the people regarding the requirements for medical study, and we have seen the view taken of dentistry in the past, and to a great extent at this time. Is it surprising that with this conception of dentistry the applicant to our schools should have a very different idea, or that he should not so universally

become an ethical man after graduation as does the physician? One might assert without fear of serious contradiction that but a small per cent of the applicants for dental training come to the schools with the thought that they are entering a learned profession, or that they have come to equip themselves to study vexed problems, many of which, even if they should live to the four score and ten years, usually allotted man, they will not have time to solve. Do dental, as medical students, feel that they must take post-graduate work and spend years in foreign travel, visiting hospitals and schools of pathology before they are fully equipped for practice, or to fit themselves for greater study? Or do they eagerly seek hospital interneships, which monopolize all their time for two or three years preceding their post-graduate study? It is true a few graduates remain in dental schools as demonstrators, but usually most of these remain only that they may become more efficient technicians, and to get a better insight into the mechanical side of dentistry, not as a rule to learn more of histology, more of pathology, etc. There are notable exceptions to this rule, but the exceptions are rare.

Many of the applicants to dental schools have chosen dentistry as a life work because they have the erroneous opinion that it is a calling giving large returns in money for a small outlay of talent, and that sufficient knowledge for its practice is not only easily acquired with indifferent primary education, but that the practice of dentistry is light and easy work. They rarely become dispossessed of these ideas until they have become practitioners, and I fear some never realize that they are members of a learned profession. To this conception of their calling may be attributed the lax ethical practice of some dentists. Great progress is making for a betterment in this direction, as is attested by the attitude of this wonderful society of yours, and by other similar association of younger dentists which stand for higher and better ethics. Still much must vet be done to lift our profession to a higher plane and this cannot be done unless we learn how professional men should deport themselves toward one another. tist can gain his own, his colleagues, or his patients' esteem by belittling the services of even his weakest brother. Dentists are too much given to criticising the work of other practitioners. We all do work which proves after a time to be miserably poor, work we are not proud of when we see it in after years. No man can do equally fine and perfect operations, at all times, and under all circumstances. Some days we are not physically at our best; our nerves are out of order. Sometimes we have patients for whom no one could do perfect operations. Remember this when you see failures from the hands of other operators, and be charitable. Instead of criticising other practitioners mentally, or to your patient, which is worse, remember the golden rule, since before you get through with your newly acquired patient you may find him so difficult to work for, or there may develop so many obstacles in the way of success, that you may be glad if he goes back to his old dentist.

Do not always believe what all new patients tell you of the other fellow. It may be that they will say just as mean things of you to some one else. I may here relate an experience I recently had with a brother practitioner. I had the care of a young fellow as a patient from the time he was a kid. I never had a more difficult patient to work for; he was a terror, and his teeth just melted away. I never served a patient more faithfully. I was always completely exhausted after an hour with him, but I got him to his twenty-third year without the loss of a tooth. He had become to some extent immune to decay. Many of the fillings I had made for him were doing good service, but naturally were defective, but I was keeping close watch over him and only refilled his teeth as they showed absolute need for it. In my absence from the city he went in to see another dentist. Instead of rendering him temporary services and sending him back to me, he condemned much of the work I had done for the boy, said uncomplimentary things about me, said I was too busy, I had too much to do, and that I had neglected his teeth, etc. He persuaded the young man to have fifteen or twenty or more of the fillings removed, and replaced them with porcelain. The result was that the whole family thought I had neglected the patient, as this dentist told them, and their minds were poisoned against me. I have learned since that almost all of the porcelain fillings made by my censor have fallen out, and they now hate him worse than they hate me. When a patient comes to us from another dentist who is temporarily absent from his office we should give him temporary service only, and refer him back. We cannot do otherwise and be ethical.

Unless we know a man has been grossly careless or unless we know him to be a quack, never criticise unfavorably, even if the work

is poor. We gain nothing by it, and we may do a worthy fellow practitioner a wrong. Patients are forgetful as to the time when services are rendered. I have records of every filling I ever made, dating back to 1871. These records have won me pounds of candy, the wager being placed on the time when some particular service has been rendered, perhaps the last operation. The patient almost always underestimates the elapsed time. If he sets it at two years, most likely the record will say five, or sometimes longer. It is not an uncommon thing for a patient to say, "That filling you last made for me has come out." I reply, "Is that so? That is too bad." I look at the tooth indicated and feel sure that it was never filled, but that it is a new cavity. I look at the record and after a little explanation and exhibition of the record convince him that the cavity is a new one, probably an approximal cavity in which the dentine has been destroyed, leaving nothing but a thin wall of enamel above, which has suddenly broken down. The patient was honest in the belief that a filling had been dislodged. He had not only made the mistake regarding the loss of a filling, but probably may have underestimated the time since he was in for an examination. Had this patient gone elsewhere there would have been an opportunity for an unethical man to make capital out of it, but capital, the increment from which would bring in poor returns. No one ever gains anything by pulling down some one else. He loses self-respect, and lowers himself in the minds of those he hopes to gain as patients. Such practices never pay in any wav.

Many times I have had people come to me requesting an opinion on the services recently rendered by some one else. I kindly but firmly decline to give it; it is undignified to do otherwise. Always protect a worthy brother practitioner, even if he has made a bad blunder. We all make mistakes; no one is infallible. I have many times saved a young practitioner a great injury by saying a few kind words for him. A wise look, a shrug of the shoulders, is sometimes more damnable and contemptible even than outright saying mean things about a fellow practitioner.

To be strictly ethical is only to be a self-respecting, true man. Let us prove to the world that we are not mere mechanics, but truly thoughtful, studious, ethical, professional men, and in time dentistry will take its place where it belongs by the side of the older professions. It lies with us to make it thus.—Northwestern Dental Journal.

#### A STUDY OF THE ARTIFICIAL CROWN FOR THE BICUSPID.

BY DR. A. J. COTTRELL, KNOXVILLE.

In the routine of everyday practice, the question of a substitute for the natural crown for these teeth is one which has given all of us no little concern, whether it be for the single crown or for the abutment in bridge work. I shall confine my remarks to the first bicuspid, because of the fact that the second, on account of its more distal position and its larger and single root, is more easily managed, and any method applicable to the first is even more simple when applied to the second.

We are all of one mind in the opinion that the esthetic must come in for a large share of consideration when the crown is to be applied; but for myself it seems that the pendulum has swung too far in this direction, that there is a tendency to sacrifice utility and stability for appearance.

I confess that the selection of a crown for this particular tooth is always a problem to me, whether for abutment or single crown, and to determine wisely requires no little thought. The literature on the subject is often misleading, as it seems that most of those who write and devise new methods have in their minds teeth that will admit of crowns at least half an inch in length.

The shell crown is considered objectionable, in fact hardly applicable, on account of its appearance, and by many because of the slight irritation at the gum margin, and both objections are certainly well founded; but the fact remains that of all the crowns ever vet suggested the shell crown is still the strongest and most stable as well as the simplest of construction. In spite of its deficiency on the score of appearance, there are manye mouths in which it may be used, particularly those of men having heavy beards, and even in many clean-shaven men and a few women; and when applicable at all should be given preference over all others. In those cases having very short crowns, an eighth of an inch or less in length, and considerable overbite, it is positively the only substitute from which results may be expected, as it is not possible either in an all-porcelain or porcelain-faced crown to have sufficient strength to withstand the stress of mastication. As to the objection to the gingival irritation, this has been greatly obviated by our having learned that it is not at all necessary to extend them under the gum; and then the same objection is applicable to any other crown yet suggested.

What shall we use when the shell is not applicable? This is the usual condition, and calls for keen discrimination. The manufactured crown of porcelain, having the pin either baked in or detached (of which the Logan is, perhaps, the most common in use), has in the hands of competent operators, made an excellent record and is used more than any other class.

There are some serious objections to this, however. To my mind the main one is that in nearly all cases the pin must be split; and however skilfully each prong is bent to shape, there remains the acute angle at the bifurcation; and to make it adaptable to the roots the dentine, between, binding the two together, must be cut away accordingly, leaving the roots often nearly, if not completely, separated.

The roots of this tooth are always small and less adapted to carrying a crown than any other—possibly the lateral incisor excepted—and to cut away any of the material binding them together greatly adds to the difficulties and should be limited to the smallest amount possible.

It has been demonstrated, however, that with great care this crown may be made to serve a very useful purpose. More of these crowns have come to grief because of faulty occlusion than anything else, the operator having failed to provide for the lateral movement of the mandible in mastication, thereby throwing unnecesary strain usually on the outer cusp. The results need no elaboration.

It is absolutely essential in the application of this crown to any place that when preparing the root the actual gingival attachment be not severed, as when once severed it never recovers its normal condition. The part of this root to which it is naturally attached being cut away, there is nothing for it to attach to, if so inclined, and it remains ever afterwards a swollen, bleeding eyesore and a monument to gross stupidity or carelessnes. For this reason the root trimmer for use on the engine and providing for a flat surface root should not be used, but properly shaped stones, following always the festoon of the gum and Never cutting beyond the attachment.

Since the advent of porcelain and the practical furnace for its baking, the built-up crown, made by using a facing and platinum pin and cap made as for the Richmond, building the inner cusp, and filling all the irregularities with porcelain, has been much used; but, like the manufactured crown, it is desirable only in those cases having sufficient length and proper occlusion to give the inner cusp a sufficient bulk of porcelain to provide the necessary strength.

It may be made either with or without the band, and has two great points of superiority over the manufactured crown; one is the perfect adaptation which may be had when the platinum disk is burnished and fitted to the end of the root, giving a joint much superior to any that may be made by grinding when the manufactured crown is used. The other lies in the fact that the pins are fitted directly into the canals, holes being punched at exactly the proper places in the disk for this purpose, thereby obviating the necessity for cutting away any of the tooth substance between the two roots.

But the fact that this crown calls for a much greater expenditure of time, energy, and skill on the part of the operator, and consequently a greater cost to the patient, I believe it would be almost universally used by those having the facilities for its construction. We are told by those who have the ideal in mind that the item of cost should have no weight in determining the service we shall render our patients; but I must confess that in the workaday world which I know it looms up as an ever-present interrogation, which must have consideration.

The next class of crowns for our consideration is the porcelain front with the gold cusp and body. Of these there are two kinds. The shell crown, having a facing soldered in or provision made for baking it on with the ordinary porcelain used for inlays, is a very serviceable crown under certain conditions, but is applicable only to those cases of reasonable length and favorable conditions as to the stump; and while in some cases it serves an admirable purpose, its range is too limited to permit of anything like general use. The other is the Richmond crown, which was one of the first devised. It has stood the test of time and has met all the requirements demanded of it. It possesses all the advantages of the all-porcelain, and besides has the element of strength, in which they are deficient.

There are only two objections that may be urged against it: A lack of translucency on account of the bulk of gold behind the facing, and (2) the difficulty of adjusting and soldering together. The one is more fancied than real; the other should not be allowed to obtain, as it could not be properly considered an objection. It can be said of this, as of the shell crown, that there is always a slight irritation of the gingival border because of the band, if the band is used; but, as with the shell crown, this may be avoided by carefully adapting the band to the gingival attachment. But must we use bands? A great deal has been written and said pro and con, and I shall bring no arguments of a scientific nature on the subject, but will say that twenty years of clinical observation and experience lead me to the conclusion that but little, if anything, is to be gained by their use. Let me also say that, while the Richmond is one of the first crowns suggested, these twenty years have brought me to the conclusion that it is the crown PAR EXCELLENCE for this location when the æsthetic is to be considered.

Let me also emphasize the fact that, no matter what crown we are using, faulty occlusion is the rock upon which more of them have been wrecked than any other and is the point calling for the keenest of discrimination and the most profound care.—Dental Headlight.

#### SULPHO-CARBOLIC ACID—A VALUABLE DRUG.

BY ELGIN MA WHINNEY, D.D.S., CHICAGO.

Several years ago I called attention to the usefulness of phenosulphonic acid in the treatment of large pus pockets in the alveolar process about the roots of teeth. The value of this preparation has never gained much recognition, principally because of the difficulty of getting the pure drug. I think Dr. George W. Cook was first to suggest making it by combining equal parts of melted phenol crystals and C. P. sulphonic acid, heating slightly to facilitate union. A good deal of difficulty has been experienced in getting the necessary pure drugs with which to make the combination and without which union will not take place. About two years ago I learned that Merck makes this preparation and supplies it to the trade under the name of

sulpho-carbolic acid. After two years' trial I find Merck's preparation even more useful than that I formerly employed. I recommend it for the treatment of large alveolar absorptions about the apices of roots of teeth in chronic alveolar abscesses. It should be used to burn out these pockets in exactly the same manner as most dentists have been using phenol—the root canals should first be cleansed and dentine deodorized. The pocket and sinus should next be freely washed with a saturated solution of soda bicarbonate to cleanse and empty them of pus, when after the necessary precautions are taken to avoid burning the soft tissue the sulpho-carbolic acid is forced through the root canal and out the sinus. In case of recent origin or semi-acute cases where there is no perceptible bone absorption, this agent is not indicated. I heartily recommend it in the treatment of caries of bone and necrosis about the jaws in exactly the same manner as we now use aromatic sulphuric acid.

I have previously suggested its value in treatment of deep pus pockets in pyorrhœa alveolaris both before and after scaling. I now wish to recommend its application to the necks of teeth which are covered with hard black serumal calculus. All who have had experience know that this variety of deposit is very hard and often exceedingly difficult to remove, especially when high up under the gum tissue and more especially when deposited between the roots of upper It is now my practice to treat these cases with sulphocarbolic acid, full strength, three or four times before scaling is attempted. A platino-iridium broach wrapped with a few strands of cotton should be used, with which to apply it. The teeth necks should be first cleansed of debris and mucus so the medicine can penetrate the calculus. It is best to take two or three teeth at a time and keep them dry during, and for a minute after applying. After which they should be flooded with a warm antiseptic solution. special precautions are necessary so far as the soft tissue is concerned as it is not very escharotic, in fact, I allow it to flow around the gum margins freely and find it relieves the hyper-sensitiveness and inflammation of gums which is usually present in these cases. this application three or four times two days apart. I find by experience that the calculus is much easier removed after these applications; indeed, in many cases the patient will have removed much of it by the use of the tooth brush during the days between applications. In

many instances I have brought away large pieces of calculus from under the gums on the cotton wrapped broach while applying the medicine.

A case in point will illustrate the benefit of this treatment. About two years ago a gentleman came by appointment to have his teeth cleaned. Upon examination I found the gum tissue and alveolar border around every tooth had been absorbed and ulcerated away until more than half the length of the teeth roots stood exposed. They were, in fact, not exposed for they were covered by a thick coating of black or brown calculus. A sitting of two hours was required to scale one tooth, so hard was this deposit. When I realized that I had about thirty such teeth to scale, I became discouraged and so did the patient. I concluded to try the sulpho-carbolic treatment. After five applications I scaled and polished the remaining teeth in a single hour. I could relate similar experiences with probably two hundred cases until at the present time it has become my regular method of treatment in all bad serumal calculus cases.

In very deep pyorrhœa pockets where the gum is nearly in normal position but sensitive and highly inflamed and the deposit is consequently very difficult of access I simplify the case by packing the pocket with a rope of cotton or gauze with a 25 per cent aqueous solution of sulpho-carbolic acid. By allowing the pack to remain for twenty-four hours, I not only soften the deposit, but benefit the necrotic area, as well as open the margin of the pocket so I can get free access and permit of scaling and polishing without lacerating the gum margin, or producing much pain. I find this drug penetrates inflamed gum tissue and consequently its germicidal power is of great value in these pus cases.

This question naturally arises: "What effect does the application of this agent have upon the cementum?" In answer to which I can only say I have never been able to see any bad effects. I do not think the drug remains in contact with the cementum long enough to decalcify it in the least.

I also make use of this drug to aid in removal of pulp nodules and to open up small canals which are closed by dried blood or hardened pulp tissue. I find it does quite as well as sulphuric acid and does not irritate the tissues in the apical space nearly so badly if a little should accidently pass through the apical foramen as does the latter preparation.—Northwestern Dental Journal.



Alabama State Dental Association will meet in Birmingham, Ala., May 12.

Arkansas State Dental Association will meet in Little Rock, Ark., May 26, 1908.

California State Dental Association will meet in San Francisco, Cal., June 9, 1908.

Colorado State Dental Association will meet in Boulder, Colo., June 18, 19 and 20, 1908.

District of Columbia Dental Society will meet in Baltimore, Md., June 4, 5 and 6, 1908.

Florida State Dental Society will meet in Tampa, Fla., May 21, 22 and 23, 1908.

Illinois State Dental Society will meet in Springfield, Ill., May 12, 13, 14 and 15, 1908.

Indiana State Dental Association will meet in Indianapolis, Ind., June 4, 5 and 6, 1908.

Iowa State Dental Society, Des Moines, May 6, 7 and 8.

Lake Erie Dental Association will meet in Cambridge Springs, Pa., May 19, 20 and 21, 1908.

Maryland State Dental Association will meet in Baltimore, Md., June 4, 5 and 6, 1908.

Michigan State Dental Society will meet aboard steamer "Mackinac" en route to the "Soo," Mackinac Island and return, June 10, 11, 12 and 13, 1908.

Minnesota State Dental Association will meet in St. Paul, Minn., June 8, 9 and 10, 1908.

Nebraska State Dental Society will meet in Omaha, Neb., May 19, 20 and 21, 1908.

New Jersey State Dental Society will meet in Asbury Park, N. J., July 15, 16 and 17, 1908.

New York State Dental Society will meet in Albany, N. Y., May 7, 8 and 9, 1908.

North Dakota Dental Association will met in Devils Lake, N. D., May 12, 13 and 14, 1908.

Northern Ohio Dental Association will meet in Canton, Ohio, May 26, 27 and 28, 1908.

Ohio State Dental Society will meet in December, 1908.

Pennsylvania State Dental Society will meet in Philadelphia, Pa., June 30, July 1 and 2, 1908.

South Dakota Dental Society will meet in Lead, S. D., July 22 and 23, 1908.

Southern Illinois Dental Society will meet in Greenville, Ill., Oct. 27, 1908.

Texas State Dental Association will meet in Dallas, Texas, June 11, 12 and 13, 1908.

Vermont State Dental Society will meet in Montpelier, Vt., May 20 and 22, 1908.

Virginia State Dental Association, Richmond, July 14, 15 and 16.

Wisconsin State Dental Society will meet in La Crosse, Wis., July 16, 17 and 18, 1908.

#### SOUTH DAKOTA STATE BOARD OF DENTAL EXAMINERS.

The next meeting of the South Dakota state board of dental examiners will begin Monday, July 20, 1908, beginning promptly at 9 o'clock a. m. and continuing three days, at Lead, S. Dak. All persons desiring to take this examination must make application to the secretary, and send fee of \$10.00 at least one week prior to the above date. No candidates will be received for examination who do not make application as above specified. Applicants are required to bring dental engine, filling materials, articulators, teeth, and all appliances and materials necessary to do crown and bridge work.

G. W. Collins, Secretary.

#### UTAH BOARD OF EXAMINERS.

The next regular semi annual meeting of the Utah State Board of Dental Examiners will be held in Salt Lake City, beginning at 9 a. m. Tuesday, June 16, 1908. All must pass examination before being registered. Application, accompanied by the fee of twenty-five dollars, should be filed with the secretary not later than June 13.

A. C. WHERRY, Secretary.

#### MONTANA STATE BOARD OF DENTAL EXAMINERS.

The annual meeting of the Montana State Board of Dental Examiners will be held in Helena, commencing the second Monday in July, 1908, and continuing three days. All applications, and fee of twenty-five dollars, should be filed at least ten days prior to the meeting. Application blanks, and the dental laws of Montana, which every applicant is expected to read before the examination, will be furnished upon application to the secretary. Vulcanizers, and dental engines, without handpieces, will be furnished.

D. J. Wait, Secretary,103 Broadway.

#### CLINICIANS FOR THE INDIANA STATE DENTAL MEETING. JUNE, 1908.

Dr. Truman W. Brophy, Chicago, Ill. "Cleft Palate Operation."

Dr. F. B. Morehead, Chicago, Ill. "Surgical Clinic."

Dr. J. D. Patterson, Kansas, Mo. "Pyorrhoea."

Dr. E. H. Allen, Freeport, Ill. "Gold Filling."

Dr. C. C. Corbett, Edwardsville, Ill. "Approximal Gold Filling with Cement Lining."

Dr. J. K. Conroy, Belleville, Ill. "Gold Fillings Using Non-Cohesive Gold in Gingival Third."

Dr. William Finn, Cedar Rapids, Iowa. "Gold Filling in Approximo Occlusal Surface of an Upper Bicuspid."

Dr. F. G. Richardson, Mason City, Iowa. "Gold Filling in Approximo Incisal of an Upper Anterior Tooth."

Dr. N. S. Hoff, Ann Arbor, Mich. "Treatment of Pyorrhoea."

Dr. J. P. Buckley, Chicago, Ill. "Surgery of, and Drugs Used in Pyorrhoea."

Dr. M. H. Fletcher, Cincinnati, Ohio. "Pyorrhoea."

Dr. W. F. Lowrenz, St. Louis, Mo. "Gold Inlay."

Dr. F. H. Swartz, Morris, Ill. "Cast Gold Inlay."

Dr. F. W. Williard, Ann, Ill. "Gold Inlay."

Dr. W. H. Taggart, Chicago, Ill. "Cast Inlays and Bridges."

Dr. Louis E. Bake, Chicago, Ill. "Hollow Cast Inlay."

Dr. H. B. Tileston, Louisville, Ky. "Cast Gold Inlay."

Dr. L. A. King, Henderson, Ky. "Cast Gold Inlays."

Dr. Burton Lee Thorpe, St. Louis, Mo. "Gold Inlay."

Dr. L. E. Custer, Dayton, Ohio. "Electrical Casting of Gold Inlay."

Dr. Henry Barnes, Cleveland, Ohio. "Gold Inlay, Using Platinum and Pure Gold."

Dr. F. M. Fulkerson, Sedalia, Mo. "Cast Gold Inlay, Using Hand Pressure."

Dr. L. P. Davis, Lincoln, Neb. "Veneer Gold Inlay."

Dr. Robert Seymour, Philadelphia, Pa. "Cast Gold Inlay."

Dr. Fred H. McIntosh, Bloomington, Ill. "Forming Wax for Cast Gold Work, Investing of Same and Casting."

Dr. Lee K. Stewart, Chicago, Ill. "Gold Inlay from Model."

Dr. George C. McCann, Danville, Ill. "Special Anterior Bridge

- Abutments and Variations of the Same, for Permanent Splinting of Loose Teeth."
  - Dr. G. W. Schwartz, Chicago, Ill. "Splint for Loosened Teeth."
- Dr. F. E. Roach, Chicago, Ill. "Cast Abutments for Bridge Work."
- Dr. W. M. McCall, Louisville, Ky. "Cast Abutments for Bridges."
- Dr. Max M. Eble, Louisville, Ky. "Cast Attachments for Bridges."
- Dr. H. K. Kellogg, Louisville, Ky. "Cast Attachments for Bridges."
- Dr. C. E. Bellchamber, Effingham, Ill. "Filling of Ascher's Artificial Enamel."
  - Dr. C. M. Baldwin, Chicago, Ill. "Ascher's Artificial Enamel."
- Dr. Burton Lee Thorpe, St. Louis, Mo. "Translux Enamel Filling."
- Dr. H. H. Harrison, Wheeling, W. Va. "Ascher's Artificial Enamel."
- Dr. L. H. Arnold, Chicago, Ill. "Making of an all Carved Porcelain Jacket Crown."
  - Dr, F. L. Wright, Wheeling, W. Va. "Porcelain Restoration."
  - Dr. Alden Bush, Columbus, Ohio. "Manipulation of Porcelain."
- Dr. A. L. Le Gro, Detroit, Mich. "Labial Porcelain Restoration in Anterior Teeth."
  - Dr. W. H. Cudworth, Milwaukee, Wis. "Porcelain Restoration."
- Dr. C. I. Keely, Hamilton, Ohio. "Cavity Preparation for Gold Inlays."
- Dr. Fred W. Gethro, Chicago, Ill. "Cavity Preparation for Gold Filling."
- Dr. Raymond E. Grant, Louisville, Ky. "Preparation of Cavities for Gold Inlays."
- Dr. Henry Pirtle, Louisville, Ky. "Combination Fillings, Cement and Amalgam."
- Dr. L. P. Bethel, Columbus, Ohio. "Little Helps in Orthodontia."

Dr. C. L. Snyder, Freeport, Ill. "Method of Anchoring Bridges Adapted to Cases Where Lower Incisors Have Been Lost Through Absorption."

Dr. George W. Haskins, Chicago, Ill. "Telescoping Attachments for Partial Dentures."

Dr. George W. Haskins, Chicago, Ill. "Telescoping Attachments for Partial Dentures."

Dr. C. J. Lyons, Jackson, Mich. "Porcelain Crowns with Cast Cap and Dowel for Badly Decayed Roots."

Dr. W. G. Bow, Louisville, Ky. "Restoration Badly Broken Down or Fractured Roots with Porcelain Crowns."

Dr. C. E. Byington, Harrisburg, Ill. "A Time Saving Method in Constructing Shell Crowns."

Dr. Walter Dittmar, Chicago, Ill. "Technique of an Accurate Method for Making Gold Shell Crowns of Proper Contour."

Dr. L. P. Davis, Lincoln, Neb. "Gold Crowns."

Dr. Willis Coston, Topeka, Kan. "Gold and Porcelain Bridge Work."

Dr. Harry Lee, Louisville, Ky. "Bridge Work."

Dr. M. H. McMillan, Roseville, Ill. "Some Useful Methods."

Dr. E. B. Spalding, Detroit, Mich. "Splint for Teeth When Impossible to Set Posts Parallel."

Dr. Wliliam H. De Ford, Des Moines, Iowa. "Instructions in Somnoform Administration."

Dr. George W. Schwartz, Chicago, Ill. "Removable Bridge Work."

Dr. J. H. Prothero, Chicago, Ill. "Anatomic Occlusion of Artificial Teeth."

Dr. George H. Wilson, Cleveland, Ohio. "Antagonizing Complete Artificial Dentures."

Dr. E. J. Perry, Chicago, Ill. "Anatomic Occlusion of Artificial Teeth."

Dr. Robert Canine, Louisville, Ky. "Preparation of Cast for Temporary Teeth."

Dr. Walter Dittmar, Chicago, Ill. "Exhibit of Natural Sized Models of Teeth, Tooth Dissections, Drawings and Measurements, Showing the Contour of Normal Shaped Crowns."

#### NORTHERN INDIANA DENTAL SOCIETY.

The twentieth annual meeting of the Northern Indiana Dental Society will be held at Fort Wayne, Ind., September 8, 9, 1908. An excellent meeting is expected.

#### INDIANA STATE DENTAL BOARD.

The next meeting of the Indiana State Board of Dental Examiners will be held in the State House at Indianapolis, beginning at 9 o'clock Monday morning, June 8, and continuing three days. All applicants for examination will be required to be present at this time. For further information address the secretary, F. R. Henshaw, Middletown, Indiana.

#### ILLINOIS STATE BOARD OF DENTAL EXAMINERS.

The next meeting of the Illinois State Board of Dental Examiners for the examination of applicants for a license to practice dentistry in the State of Illinois will be held in Chicago, at the Northwestern University Dental School, southeast corner of Lake and Dearborn streets, beginning Thursday, June 4, 1908, at 9 a. m.

Applicants must be in possession of the following requirements in order to be eligible to take the examination: (1) Any person who has been engaged in the actual, legal and lawful practice of dentistry or dental surgery in some other state or country for five consecutive years just prior to application; or (2) is a graduate of and has a diploma from the faculty of a reputable dental college, school, or dental department of a reputable university, or (3) is a graduate of and has a diploma from the faculty of a reputable medical college or medical department of a reputable university, and possesses the necessary qualifications prescribed by the board.

Candidates will be furnished with proper blanks and such other information as is necessary, on application to the secretary. All applications must be filed with the secretary five days prior to the date of examination. The examination fee is twenty (\$20) dollars, with the additional fee of five (\$5) dollars for a license.

Address all communications to

J. G. Reid, Secretary.

1204 Trude Bldg., Chicago, Ill.

#### ARKANSAS STATE DENTAL ASSOCIATION.

The next meeting of the Arkansas State Dental Association will be held in Little Rock, May 26 and 27. A good program is being prepared and a large attendance is anticipated. The president is Dr. P. A. Skeen, Texarkana; secretary, Dr. L. K. Charles, Eureka Springs.

#### THE MICHIGAN STATE BOARD.

The Michigan State Board of Registration and Examination in Dentistry will hold its next semi-annual meeting to examine candidates for registration in Michigan, beginning Monday, June 8th, at 8 o'clock and continuing through the 13th, in the Dental Department of the University of Michigan at Ann Arbor. Applications must be in the hands of the secretary at least five days before the meeting.

For full particulars address the secretary, E. A. Honey, Kalamazoo, Mich.

Very sincerely yours,

E. A. Honey, Secretary-Treasurer.

#### MICHIGAN STATE DENTAL SOCIETY.

Annual meeting and boat trip combined.

The Michigan State Dental Society will hold its annual meeting on Wednesday, Thursday, Friday and Saturday, June 10th to 13th, inclusive, on board the steamer City of Mackinaw, on a trip through the Detroit River, Lake St. Clair, the Flats and on to Mackinaw and the "Soo." The total expense of the trip, including passage, meals, berth, will be nineteen dollars for the round trip, and all our ethical dentists and friends are cordially invited to join us. The principal feature of the meeting will be table clinics, good papers, a complete dental exhibit and a good time. An ideal meeting under ideal conditions. Four days to find out what our fellow practitioners are doing.

Those desiring to have accommodations reserved for them should apply at once to Dr. O. W. White, 406 Fine Arts Building, Detroit, stating the number of persons in party and whether it is a family party or all men.

A deposit of five dollars is required for each reservation.

O. W. WHITE,

Local Arrangement Committee. '

#### GEORGIA STATE DENTAL SOCIETY.

The Georgia State Dental Society has changed its place of meeting from White Sulphur Springs to Augusta. The meeting will be held June 10, 11 and 12.

#### IOWA BOARD OF DENTAL EXAMINERS.

The Iowa State Board of Dental Examiners will hold its next meeting for examination at Iowa City, June 12, 13, 15, 16, 17, 1908. Written and practical examination will be required.

For further information address, E. D. Brower, Secretary, Le Mars, Iowa.

#### THE MINNESOTA STATE BOARD.

The Minnesota State Board of Dental Examiners will hold a special meeting at the State University, Dental Department, in Minneapolis, beginning at nine o'clock June 10, 1908. At this meeting all applicants for registration in this State will be examined.

For further information apply to

GEO. S. TODD, Secretary, Lake City, Minn.

#### THE MISSISSIPPI DENTAL ASSOCIATION.

The fifteenth annual meeting of the Mississippi Dental Association will be held in the Senate chamber of the Capitol at Jackson, Miss., on June 9, 10 and 11.

A special programme is being arranged and a large attendance is expected. All ethical practitioners invited. For further particulars address

Dr. E. Douglas Hood, Secretary,

Tupelo, Miss.

#### VIRGINIA STATE DENTAL ASSOCIATION.

The meeting place of the Virginia State Dental Association has been changed to Richmond, Va., Murphy's Hotel Annex, July 14, 15, 16, 1908.

W. H. Pearson,

Corresponding Secretary.

#### SOUTHERN WISCONSIN DENTAL ASSOCIATION.

The Southern Wisconsin Dental Association will hold its fourteenth meeting in Platteville, Wis., May 27 and 28, 1908. A hearty invitation is extended to all ethical practitioners.

#### ALUMNI ASSOCIATION OF ST. LOUIS.

The Alumni Association of the St. Louis Dental College wish to announce that their annual clinic will be held at the College building, Grand and Caroline street, Tuesday and Wednesday, May 19 and 20, 1908.

A good program is being arranged and all graduates of the college are respectfully requested to be present and aid in making this meeting a success.

#### MISSOURI STATE DENTAL ASSOCIATION.

The forty-third annual meeting of the Missouri State Dental Association will convene in St. Louis June 1, 2, 3, 1908, at the Planters Hotel. Rates 1.50 and up per day. Efforts are being made to make this the most successful meeting in the history of the association. Distinguished members of the profession from out of the state will be present. All ethical members of the profession are cordially invited to come.

- F. M. Casto, Chairman.
- P. H. MORRISON,
- J. F. AUSTIN,
- O. J. FRUTH.

Executive Committee.

St. Louis, Mo.

- J. W. Hull, Pres., Kansas City, Mo.
- E. P. DAMERON, Cor. Sec., St. Louis, Mo.

#### NORTHERN OHIO DENTAL ASSOCIATION.

The fifty-first annual meeting of the Northern Ohio Dental Association will be held at Canton, Ohio, May 26, 27, 28, 1908.

The sessions will be held in the city's auditorium, one of the largest in the middle west, with headquarters at the Courtland hotel. There are numerous other hotels in Canton, so there will be accom-

modations for all. Hotel rates may be had at from \$1.50 to \$5.00 per day, American plan.

Canton is essentially a dental manufacturing town, having three large and busy plants. The exhibits will be first class.

The committees are sparing no time nor expense to make this an especially attractive meeting. The program will be up to the standard of previous years. Men of international reputation have been secured to read papers and clinics.

Remember the time and place, May 26, 27, 28, 1908, Canton, Ohio.

The Executive Committee,

W. H. WHITSLAR, J. H. WIBLE,

#### DENTAL STATE BOARD SECRETARIES.

Alabama—T. P. Whitby, Selma.

ARKANSAS—A. T. McMilan, Fifth and Main Sts., Little Rock.

ARIZONA-Wm. G. Lentz, Phœnix.

CALIFORNIA—C. A. Herrick, Jackson.

COLORADO-R. P. McGee, 405 Opera House Block, Denver.

DELAWARE—C. R. Jeffries, Wilmington.

DISTRICT OF COLUMBIA—W. E. Dieffenderfer.

FLORIDA-W. G. Mason, 215 Am. Nat. Bank Bldg., Tampa.

GEORGIA-D. D. Atkinson, Brunswick.

IDAHO-W. W. Paling, Boise.

Illinois-J. G. Reid, 67 Wabash Ave., Chicago.

INDIANA-D. L. Stine, Indianapolis.

Iowa-E. D. Brower, LeMars.

KANSAS-M. F. Hults, Hutchinson.

Kentucky—Henry Pirtle, 116 W. Chestnut St., Louisville.

LOUISIANA-L. A. Hubert, Hennen Bldg., New Orleans.

MAINE-D. W. Fellows, Portland.

MARYLAND-F. F. Drew, 701 N. Howard, Baltimore.

MASSACHUSETTS-G. F. Mitchell, Haverhill.

MICHIGAN—A. L. Legro, Three Rivers.

MINNESOTA—G. S. Todd, Lake City.

MISSISSIPPI—W. R. Wright, Jackson.

MISSOURI—S. C. A. Rubey, Clinton.

Montana—B. J. Keenan, Butte.

NEBRASKA-C. F. Ladd, Lincoln.

NEVADA—C. A. Coffin, Reno.

NEW JERSEY-C. A. Meeker, 29 Fulton Street, Newark.

NEW MEXICO-C. N. Lord, Santa Fe.

NEW HAMPSHIRE—Andrew Sawyer, Manchester.

NEW YORK-Frank French, 62 State Street, Rochester.

NORTH CAROLINA-R. H. Jones, Winston-Salem.

NORTH DAKOTA—H. L. Starling, Fargo.

OHIO-H. C. Brown, 185 East State Street, Columbus.

OKLAHOMA-A. C. Hixon, Guthrie.

OREGON-G. S. Wright, McMinnville.



#### A VARNISH FOR IMPRESSIONS.

Sodium silicate and ammonium hydroxide equal parts, forms a varnish that is indispensable for plaster molds, impressions, etc., and is inexpensive. For impressions—apply in the same manner as you would shellac. A coloring matter, as carmine, may be added so that the division line may be readily seen. Separate in the same manner as with shellac. When used on models in flask before packing the rubber the plaster readily separates from the plate after vulcanizing, leaving it clean and smooth.—T. A. Leach in Review.

#### ARTIFICIAL PLATINA ON BRASS.

The green coatng—"platina"—found upon bronze objects, especially such as have lain buried for some time, is not only pleasing to the eye, but also serves a practical purpose, in that the metal beneath is protected from further corrosion.

Brass objects can be coated, as well as bronzes, by means of a solution made according to the following formula:

Copper 3	30 gms.
Nitric acid, conc	30 gms.
Acetic acid, 6	00 gms.
Ammonium chloride 1	1 gms.
Ammonia water 2	0 gms.

The copper is dissolved in the nitric acid, and, as soon as solution is effected, the other ingredients are added. The solution must be allowed to stand several days before using.

Would Consolidate Registry Boards.—8 pt ant. caps.

That the State would annually save thousands of dollars and that the work would be accomplished in just as methodical and accurate a manner as under the present arrangement, was the argument advanced by Senator Allan T. Treadway, of Berkshire, before the committee on public health in support of his bill to abolish the present individual board of registration in medicine, pharmacy, dentistry, veterinary and embalming and the establishment of one registrar appointed by the Governor to do the same work under guidance of the State Board of Health.—Boston American.

With this issue we inaugurate a new department—that of abstracts and selections from the Dental Journals of Europe. We congratulate ourselves and our readers on our good fortune in securing so able a scholar as Dr. Thomas L. Larseneur, who will have charge of this department, and who will attend personally to the translations from the different languages.

#### MUMMIFYING.

I very seldom attempt to drill out and fill out the roots of the bicuspids and molars, but devitalize, open up the pulp chamber, then open the mouth of the root canals with Dr. J. Leon Williams' triangular treamers, wipe out the same with perhydrol ten per cent, then with a solution, absolute alcohol 1 oz., mercury bichloride 1 gr., and fill the mouths of the canals and pulp chamber with mummifying paste. The Soderbury formula with aristol or iodoform is used and the tooth sealed with the filling the case may require.—Dr. W. H. Jones, Items.

#### GUTHYMOL.

Thymol, added to gutta-percha, makes a very useful preparation for dental purposes. It possesses very desirable working properties, setting slowly and becoming hard. I have used it successfully as a temporary stopping and filling material and to crowd away overhanging gum margins and to obtain impressions of cavities. To obtain a satisfactory grade of guthymol add to base-plate gutta-percha a five per cent solution of thymol and soften the gutta-percha under heat. A mixture of guthymol, oil of cajuput, and a few fibres of asbestos makes an excellent root-canal filling. When ready to fill a cavity add to the required amount of guthymol a few crystals of thymol and spatulate the mass thoroughly, when it will acquire a degree of pliability which renders its insertion in a tooth-cavity an operation of the simplest character.—Carlos Zacharias, Cosmos.

#### PERICEMENITIS.

If, instead of using equal parts of aconite, iodine and chloroform, you use this prescription: Tineture aconiti (rad.), 1 fluid ounce; chloroform, 4 fluid ounces; menthol, 20 grains, you will get excellent results.—J. P. Buckley, in Dental Digest.

#### ANTISEPTIC SPRAY FOR TEETH AND GUMS.

In cleaning teeth I frequently follow the stick and ribbon floss with the brush wheel used upon the coronal surfaces. After this is all done, I use an antiseptic spray under a pressure of thirty pounds, and go all over the teeth, between them, and especially under the gum margin, to thoroughly wash out any debris that may be left. The spray that I use is echefolta, 1 ounce; dioxygen, 5 ounces, and water, 4 ounces.—J. V. Conzett in Review.

#### MASTICATION.

If all the people in the United States would at once begin chewing properly, three-fourths of the doctors would be put out of business.—Kellogg.

# TO REMOVE VULCANIZED RUBBER FROM TEETH TAKEN OFF PLATES.

Place teeth in a small, wide-mouthed bottle, containing chloroform, overnight. The rubber may be removed as easily as so much charred cork.—J. W. Marshall, in Cosmos.

#### ANNEALING.

All hard alloys should contain not less than sixty-five per cent of silver. Hard alloys are made rapid, medium or slow-setting, entirely by annealing in hot or boiling water, without any change whatever in the formula; but the same result may be attained by aging in a warm atmosphere, which, of course, takes much longer. The well-annealed or well-aged and thus slow-setting hard alloys, are the best to use, since they require less mercury and the expansion is much less. All hard alloys expand to some extent, but should not exceed an expansion of one point or .001 of an inch.—C. S. Fuller, Items.

#### FOR SALE.

Chicago practice, South Side, good location; furniture, modern outfit, instruments, etc., at less than invoice. Address 4197 Chicago, care Frink and Young.



Fire.—The dental office of Dr. J. R. Greer, of Marietta, Ga., was destroyed by fire. The loss was \$1,000.

Sangamon-Menard County Dental Society held its meeting in Decatur March 26th, with a good attendance.

Fined for Illegal Practice.—A dentist in Sioux Falls, S. D., was convicted and fined \$100 for illegal practice.

Salatich-Songy.—Dr. R. J. Salatich and Miss Laurence Songy, both of New Orleans, La., were married April 21.

Scharff-Kalman.—Dr. F. H. Scharff, of Palquemine, La., and Miss Cecelia Lalman, of Chicago, were married March 15.

Fox River Valley Dental Association held its meeting in Geneva, Ill., March 18th. There were 31 of the 35 members present.

New Member of Dental Board.—Dr. L. L. Yonker of Bowling Green, Ohio, has been appointed on the Ohio State Dental Board.

Mears-Lumpkin.—Dr. James Mears, of Richmond, Va., and Miss Judith Lumpkin, of New Design, Va., were married April 7.

Harvard's New Dental School.—The Harvard Dental School has procured the necessary funds for the erection of a new building.

Reid-Kerdolff.—Dr. Thomas Reid and Mrs. Margaret Alice Kerdolff, both of Chicago, were married at LaPorte, Ind., April 11.

Fire.—Dr. C. W. Calvert, of Atwood, Ill., had the misfortune to lose his office and contents by fire; loss, \$2,300; insurance, \$1,550.

Woman Dentist Accused.—A woman dentist in Boston, Mass., has been summoned to court on the charge of practicing dentistry illegally.

Hollenbeck-Haislet.—Dr. T. B. Hollenbeck, of Boone, Iowa, and Miss Della Haislet, of Minneapolis, Minn., were married in Des Moines, March 23.

New Dental Law.—A bill has been passed in the lower house of Kentucky making it compulsory for all dentists to practice under their own names.

Sentenced for Illegal Practice.—A dentist in Portland, Ore., was sentenced to imprisonment of ten days in jail and fined \$125, March 20, for illegal practice.

Dentist and Prize Fighter.—A dentist in Albany, N. Y., who practices his profession in the day time and is a prize fighter at night, was the victor in a five-round fight recently.

Appointed on Dental Board.—Dr. P. E. Callihan was appointed a member of the Georgia Dental Board by Gov. Hoke Smith, to fill the vacancy made by the resignation of one of the members.

Southeastern Nebraska Dental Society was organized April 7th and the following officers were elected: Dr. L. S. Gilmon, of Havelock, President; Dr. M. O. Johnson, of Crete, Vice President; Dr. E. M. Byrne, Lincoln, Secretary and Treasurer.

Beloit and Janesville Dental Society held a clinic and banquet in Beliot April 6th. Dr. J. J. Reed, of Beloit, presided. Dr. C. B. Helm, of Rockford, gave a clinic on "Cast Gold Inlays." Dr. G. E. Cleophas read a paper on the same subject. The next meeting will be held in Janesville, September 8th.

Honors Dr. Foster.—Dr. M. A. Foster, dean of the Baltimore College of Dental Surgery, was presented with a silver loving cup in commemoration of his 50th anniversary as a dental surgeon. The affair was arranged by a number of his professional friends. Dr. Foster was the first dental practitioner in Maryland.

Charitable Bill Passed in Canada.—A bill which has for its object the treatment of diseases of the eyes, ears, nose, throat and teeth and for the purpose of assisting the poor, has been passed by the Private Bills Committee in Quebec. It is intended to build a hospital in Montreal, and to keep a special staff of lecturers on hygiene for the schools.

New Dental Association.—Eastern District No. 2 of the Nebraska Dental Association has been organized at Omaha. The first meeting was held March 17th at the Creighton Dental College and the following officers were elected for the ensuing year: President, Dr. J. J. McMullen, of Omaha; Vice President, Dr. C. A. Marshall, of Plattsmouth; Secretary and Treasurer, Dr. J. H. Wallace, of Omaha.

Dr. T. F. Gifford in a lengthy article in a Toledo, Ohio, paper reviews his work in the Toledo schools. He has given a series of lectures to the teachers and pupils on the subject of the "dental organs." Out of an examination of 2,811 pupils there were 2,397 children whose teeth required immediate dental attention, 8,545 teeth required filling, 796 pupils who never used a tooth brush, 1,877 children who had never been to a dentist, there were 425 who required teeth extracted, 2 cases of hair lip, 3 of cleft palates and 1 of pyorrhea.

Robberies.—Drs. Frank G. Stevens, Lancaster, Pa., loss \$200; Uglow Bros., Chicago, Ill., loss \$100; R. J. Sauer, Chicago, Ill., loss \$75; G. Lighthart, Melrose Park, Ill., loss \$75; David Kallander and Franklin B. Clemmer, Morgan Park, Ill., loss \$200; W. G. Cummins, Chicago, Ill., loss \$100.

Removals.—Drs. H. D. Duncan from Des Moines, Iowa, to Dallas, S. D.; Frank Knight from Bellaire, Ohio, to Quaker City, Ohio; G. W. Clark from Webster City, Iowa, to Ft. Dodge, Iowa; F. J. Wilson from Milwaukee, Wis., to Paris, France; L. P. Baker from Rocky Mount, N. C., to Kings Mountain, N. C.; A. R. Church from Hebron, Ind., to Peru, Ind.



Dr. W. T. Harban, a dentist of Washington, D. C., died Saturday, April 4th.

Dr. A. Porter Ray, a dentist of Chicago and a member of the firm of Woollens & Ray, died March 22d.

Dr. Van Valkenburg, an aged dentist, died at Canastota, N. Y., March 20th. He was 80 years of age.

Dr. J. T. Morris, a dentist of Hot Springs, Ark., died April 7th. He was an ex-confederate soldier and 63 years of age.

Dr. Charles A. Baird, of Youngstown, Ohio, was killed March 24th, by being caught in an elevator in the Wick Bank Building, in that city.

Dr. Henry Lotshar, an American dentist, who practised in Lagos, Mexico, was drowned in the Lagos River, near that place, while sailing with some friends. The launch was wrecked.

Dr. Zeo. Wilbur Heiser, a dentist of Cincinnati, Ohio, died April 1st, in San Antonio. He was a native of Georgetown, and moved to San Antonio for his health. He died of pulmonary trouble.

Dr. J. L. Whinery, of Marshalltown, Iowa, died March 6th as a result of blood clot formed on the brain, said to be due to the use of cocaine and adrenalin, used as an anaesthetic for extraction of a tooth at the National Dental meeting, held in Minneapolis, according to a Marshalltown paper.

Dr. Byron Douglas, the first dentist to practice in Appleton, Wis., died in that city March 29th, aged 83 years. He had been a member of the Wisconsin State Dental Society and also the American Dental Society. He was a relative of Stephen A. Douglas.

Dr. Pierce F. Smith, a dentist of Denver, Colo., died April 7th, at his home in that city. He located in Colorado in 1880 and was at one time dean of the Denver Dental School and for a number of years was a member of the State Board. He was a graduate of the Philadelphia Dental College and was 71 years of age.

#### FOR SALE.

Two thousand dollar practice and fixtures in Texas town of 1,000 inhabitants. Rich community. Large territory. No opposition. Established seven years. Want to go north. Address F. S. O., care AMERICAN DENTAL JOURNAL.



#### Fig. 1.

881,722. Dental Tool.—Emerson R. Sausser, Philadelphia, Pa., assignor to James W. Ivory, Philadelphia, Pa. Filed Aug. 5, 1907. Serial No. 387,036.—A dental tool for the purpose described, composed of a handled blade, the working face of which is concave and provided with serrations, the concavity of said face extending in the direction of the longitudinal axis of the tool and said serrations extending at a right angle to said axis.

#### Fig. 2.

882,363. Dental Instrument.—Julian T. Wright, Richmond, Va., assignor of one-half to Eddie Snowden Davis, Richmond, Va. Filed Sept. 18, 1907. Serial No. 393,444.—A dental instrument for clamping a tooth while being ground, consisting of an upper and a lower holding jaw, one of said jaws being provided with an integral projecting stop, and means for adjustably securing the jaws and for holding said tooth in position between the jaws with a yielding pressure.

#### Fig. 3.

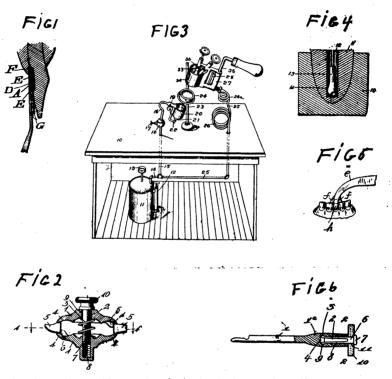
880,740. Dental Soldering Device.—Arthur H. Joy, Newton, Iowa. Filed Jan. 29, 1906. Serial No. 298,333.—In a dental soldering device, the combination of a platform, a hydro-carbon tank below the platform, an air pipe communicating with the tank, a pipe leading from the tank, a branch projecting upwardly through the platform, a hydro-carbon burner on said branch, a universal joint provided in said branch above the platform, means for securing the joint in different positions, the second branch communicating with said pipe and projecting through the platform, and having coils therein arranged at different angles, said coils being above the platform, and a burner communicating with the latter branch pipe above the coils.

#### Fig. 4.

882,002. Dental Swaging Device.—Robert G. Hopkins, Des Moines, Iowa. Filed May 13, 1907. Serial No. 373,367.—In a device of the class described, the combination of a swaging block base formed completed of a single piece of metal, and having a recess therein, circular in horizontal section, tapered from its upper toward its lower end, and having its sides arranged on nearly straight lines near its upper end, and gradually curved inwardly to almost horizontal lines at the bottom of the recess, and a number of soft metal crown forming blocks designed to receive a tooth pattern and a crown between them, and shaped to fit into said recess.

#### Fig. 5.

882,404. Dental Forceps.—Walter C. Miner, Boston, Mass. Filed July 3, 1907. Serial No. 382,006.—Dental forceps consisting of a pair of levers pivotally secured together and each having at its working end a jaw curved bodily in the plane of the working face of the jaw and out of a plane passed perpendicular to the axis about which said levers turn; said jaws lying in their closed position beside but free from engagement with



each other; the working end of one of said jaws being bifurcated to permit the passage of the ligature through the fork; and said bifurcated end being formed with a pair of claws grooved for the reception of the expansion wire.

#### Fig. 6.

881,691. Mandrel for Dental Engines.—Herbert S. Hughes, Union City, Tenn. Filed May 23, 1907. Serial No. 375,313.—The combination with a mandrel having a socket at one end, the wall of the socket at its inner end formed with an annular shoulder, of a disk having an attaching means extending through said opening, each of said arms provided with spring arms having an offset adapted to engage said shoulder, thereby connecting the disk to the mandrel head.



## CLAIMS WE MAKE FOR OUR CROW

The capable man who does nothing but make crowns day after day should produce practically perfect work. You can better afford to send your crown work to us to be executed by superior workmen under our guarantee to meet every expectation than to attempt to do your own laboratory work. If you will let us show you how you can actually save money by such a policy, you will become a regular patron of the "Farnum Quality" Laboratory.

#### We Claim These Points For Our Crowns

- 1.—They are artistic, resembling the natural tooth in shape.
- 2.—The band is heavy enough to stand a great deal of strain.
- 3.-The cusps are reinforced, so they will stand mastication. 4.-They are perfectly adapted to the tooth, and therefore
- require little fitting; the patient is thus spared pain and the dentist's time is saved.

Every branch of dental work entrusted to us receives the most painstaking attention. Each of our workmen is a specialist in his line, and each knows that nothing but the best results will be accepted from his hands. Our laboratory apparatus is strictly modern—up to the minute. YOU are the man, Mr. Dentist, for whom these advantages are waiting. Will you not write for prices?

FARNUM DENTAL LABORATORY COMPANY 1315-1316 MASONIC TEMPLE, CHICAGO.

## Peck's Gold Inlay Impression Cones

Points of Advantage in this Impression Material:



It softens readily under dry heat. It will not creep under the spatula. It is tough and can be carved perfectly. It can be removed from the cavity without fear of distortion. It is hard enough so that handling will not change its shape. It will not warp while placing the sprule in position. It is moulded in a convenient form to use.

Ask the Dental Depot for free sample. Price per box Sixty Cents. Sold at all Dental Depots.

# The Peck's Investment Compound



This Investment Material is guaranteed not to check and will ALWAYS produce the correct results. The only one advocated by Dr. Taggart in his paper read before the New York Society on Cast Gold Inlays.

Ask the Dental Depot for free samples. Price per can One Dollar.

Arthur E. Peck, M. D., D. D. S. Minneapolis, Minn. 1002 Donaldson Bldg..

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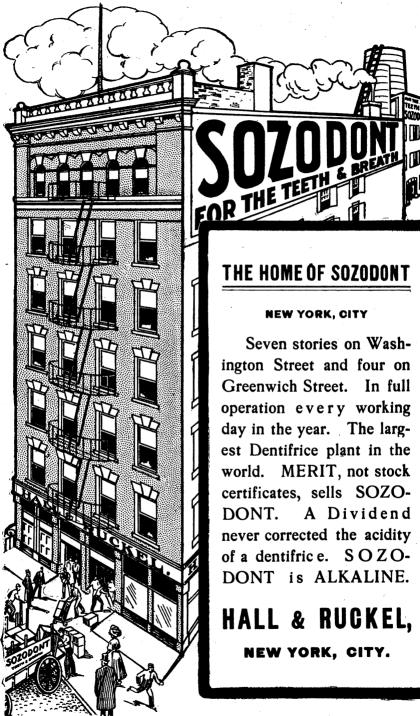
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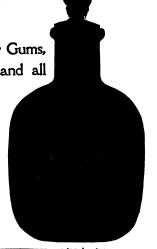
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